APPENDIX A
FEASIBLE AND REASONABLE WALLS FROM FEIS/ROD

Below is the summary table from the FEIS modified to show the change brought about by public comment and noted in the ROD. The red row in the table was a wall, Segment 4 SB2, found not to be reasonable and feasible in the FEIS, but reconsidered for the ROD and found to be reasonable and feasible, shown in green. The totals in the table have been recalculated to reflect the change.

Table 4-14
Noise Barrier Analysis
(See Figures 4-5a to 4-5e)

	Location/Designation	Length (Feet)	Average Height	Cost	Ben. Receiv	Cost/ Ben. Rec.
Feasible and Reasonable Walls	Seg. 1 - 8 Mile to Meyers Avenue					
	Wall 0 – NB 1	2,117	10.5	$994,630	31	$32,085
	Wall 1 - SB 1	1,002	7.5	$397,831	12	$33,153
	Seg. 2 - Meyers Avenue to 9 Mile Road					
	Wall 17 - NB Church - Church 10 dwellings [a]	403	10.0	$184,074	11	$30,679
	Wall 2 - NB 1	644	10.0	$294,440	10	$29,444
	Wall SB2 – School counts as 10 dwellings	902	9.0	$411,045	12	$34,255
	Seg. 3 - 9 Mile to Woodward Heights Blvd.					
	Wall 3 - SB 1	594	8.0	$243,598	8	$30,450
	Seg. 4 - Woodward Heights Blvd. To I-696					
	Wall 4 - NB - Church counts as 10 dwellings [a]	669	10.0	$306,052	12	$30,605
	Seg. 5 - I-696 to Gardenia Avenue					
	Wall 6 - Replacement Wall @ Braid	3,700	12.0	$1,869,000	NA[b]	NA[b]
	Seg. 6 - Gardenia to North of 12 Mile Road					
	Wall 7 - SB1	598	13.0	$316,898	14	$22,636
	Seg. 7 - North of 12 Mile Rd to 14 Mile Road					
	Wall 8 - NB 1	658	12.0	$332,325	12	$27,694
	Wall 9 - NB 2	3,310	12.7	$1,723,718	92	$18,736
	Seg 8 - 14 Mile Road to Rochester Road					
	Wall 10 - SB 1	1,223	10.0	$559,432	17	$32,908
	Seg. 9 - Rochester Road to Livernois Road					
	Wall 11 - NB1	695	10.9	$332,568	10	$33,257
	Wall 12 - NB2	1,143	11.9	$575,489	17	$33,852
	Wall 13 - SB1	646	10.0	$295,208	24	$12,300
	Wall 14 - SB2	2,381	13.1	$1,263,340	83	$15,221
	Seg. 10 - Livernois Road to Wattles Road					
	Wall 15 - SB 1	2,749	13.5	$1,486,948	56	$26,553
	Seg. 11 - Wattles Road to Coolidge Highway					
	Wall 16 - SB1 & SB2	2,078	12.5	$1,072,462	35	$30,642
	Wall 18 - SB3	472	12.0	$238,524	22	$10,842
	Totals	25,984		$12,897,582	478	$26,982
Walls Not Feasible or Reasonable	Seg. 1 - 8 Mile to Meyers Avenue					
	SB 2	1,880	11.5	$927,153	5	$185,431
	Seg. 2 - Meyers Avenue to 9 Mile Road					
	NB 2	600	8.8	$257,861	4	$64,465
	SB 1	1,323	7	$510,202	9	$56,689
	Seg. 3 - 9 Mile to Woodward Heights Blvd.					
	NB 1	1,333	12.7	$693,555	15	$46,237
	Seg. 4 - Woodward Heights Blvd. To I-696					
	SB 1	465	16	$278,969	0	-
	SB 2 -School counts as 10 dwellings	656	10.0	$300,119	10	$30,012
	Seg. 6 - Gardenia to North of 12 Mile Road					
	NB 1	447	14.6	$253,656	6	$42,276
	SB2	676	10	$308,921	0	-
	Seg. 11 - Wattles Road to Coolidge Highway					
	NB	1,596	10	$729,658	7	$104,237
	Square Lake Noise Wall Project [c]					

Source: The Corradino Group of Michigan, Inc.

[a] These walls are considered reasonable as schools and churches are counted as 10 dwelling units, if there are also benefiting residences.

[b] North of I-696 on the east side the planned ramp braiding will remove and replace existing walls.

[c] Noise walls were completed in 2003 in the Square Lake Road area as a separate project. See Figure 5-1e.

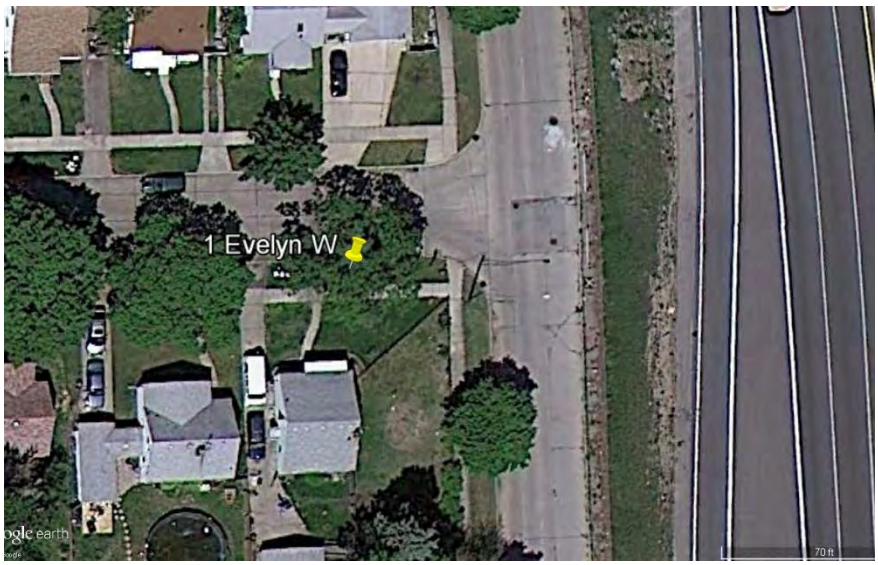
APPENDIX B
NOISE FIELD DATA MEASUREMENT SHEETS

NOISE DATA SHEET

Job Number: 4207						AM/PM	Site # 1
						Date:	5-30-14
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	South side of Evelyn Ave. W of I-75, at I-75 service drive					Temp. 62 F	
Receptor Represents	Multiple single family along service drive of I-75					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75(southbound lanes closest to noise meter)					Humidity	70%
Secondary Source	I-75 service drive, hourly volumes 200 to 1200 depending on location					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	40
Secondary Road	2	15	NA		

Test 1 – 30 min.	From	9:48 A	To	10:03 A
Decibel Reading	66.4	L_{Aeq}	80.0	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	Off Ramp	Service Drive
Cars	Video	1049	176	16
Medium Trucks (3-axle)		32	6	0
Heavy Trucks		80	3	1
Buses		14	0	0
Motorcycles		13	1	0

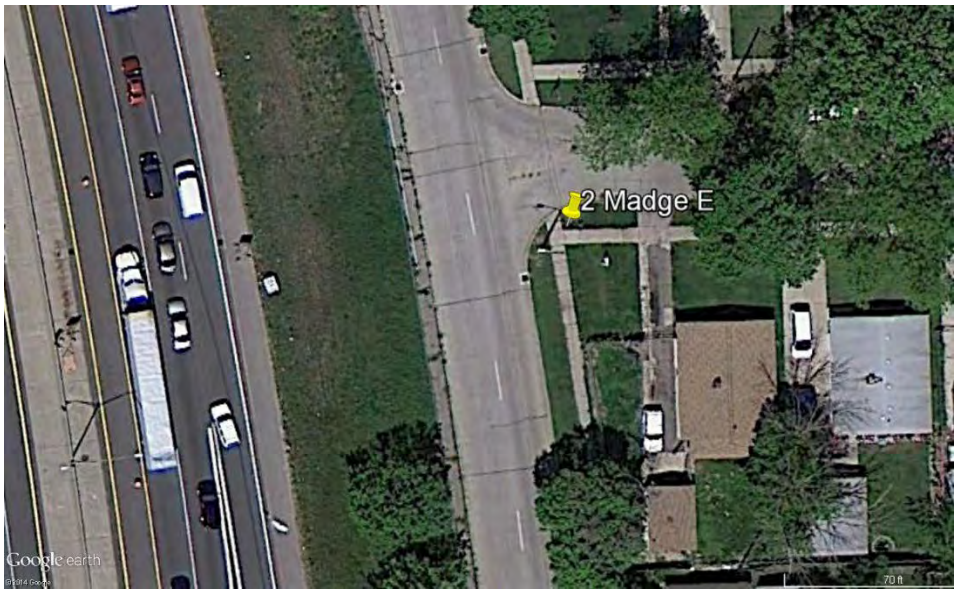


NOISE DATA SHEET

						AM/PM	Site # 2
Job Number: 4207						Date: 5-30-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	East Madge Ave., south side, E of I-75, at I-75 service drive					Temp.	70 F
Receptor Represents	Multiple single family on east side of I-75 in depressed section					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	65%
Secondary Source	I-75 service drive, hourly volume 130 to 800 depending on location					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	60
Secondary Road	2	15	NA	40	40

Test 1 – 15 min.	From	10:19 A	To	10:34 A
Decibel Reading	67.5	L_{Aeq}	75.8	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	855	video	20	
Medium Trucks (3-axle)	40		1	
Heavy Trucks	91		0	
Buses	1		0	
Motorcycles	17		0	



NOISE DATA SHEET

						AM/PM	Site # 3
Job Number: 4207						Date: 5-30-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3					11-18-02	
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	South side of Chestnut, E side of I-75, at the I-75 service drive (northbound lane)					Temp.	60 F
Receptor Represents	Single Family					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	70 %
Secondary Source	Service drive					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	60
Secondary Road	2	12	NA	40	40

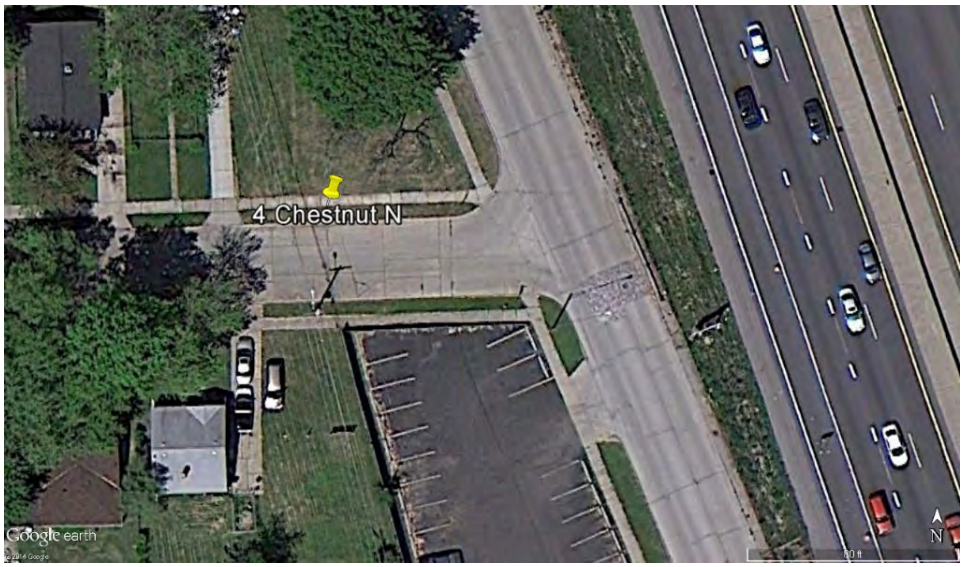
Test 1 – 15 min.	From	9:12 A	To	9:27 A
Decibel Reading	69.8	L_{Aeq}	80.2	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	916	video	12	
Medium Trucks (3-axle)	29		1	
Heavy Trucks	96		0	
Buses	9		0	
Motorcycles	2		0	

NOISE DATA SHEET

						AM/PM	Site # 4
Job Number: 4207						Date: 5-30-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	North side of Chestnut, W side of I-75, at the I-75 service drive (southbound lane)					Temp.	65 F
Receptor Represents	Single family dwellings					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	70%
Secondary Source	Service drive					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	NB 70, SB 55
Secondary Road	2	12			35

Test 1 – 15 min.	From	8:42 A	To	8:47 A
Decibel Reading	67.7	L_{Aeq}	79.0	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	1284		37
Medium Trucks (3-axle)		33		3
Heavy Trucks		60		1
Buses		1		0
Motorcycles		3		0



NOISE DATA SHEET

						AM/PM	Site # 5
Job Number: 4207						Date: 5-30-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	North side of Annabelle Ave, W of I-75, one lot back from I-75 service drive (southbound side)					Temp.	F
Receptor Represents	Single family residential, elementary school, park					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	80 %
Secondary Source	Service drive					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/65	NB 65, SB avg 45
Secondary Road	2	12	NA		35

Test 1 – 15 min.	From	8:13 A	To	8:28
Decibel Reading	68.4	L_{Aeq}	75.8	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	1431		43
Medium Trucks (3-axle)		29		2
Heavy Trucks		80		0
Buses		4		1
Motorcycles		3		0

NOISE DATA SHEET

						AM/PM	Site # 6
Job Number: 4207						Date: 5-30-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	South side of Coy Ave, W of I-75, home frontages back from I-75 service drive (southbound side)					Temp.	60 F
Receptor Represents	Single family					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	80%
Secondary Source	Service drive volume					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	65
Secondary Road	2	12	NA	40	40

Test 1 – 15 min.	From	7:18 A	To	7:33 A
Decibel Reading	65.9	L_{Aeq}	74.8	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	1607		51
Medium Trucks (3-axle)		25		1
Heavy Trucks		46		1
Buses		4		1
Motorcycles		3		1

NOISE DATA SHEET

						AM/PM	Site # 7
Job Number: 4207						Date: 5-29-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	North side of Gardenia Ave, W of I-75, at apartment setback from I-75 service drive (southbound side)					Temp.	70 F
Receptor Represents	First floor Royal Oak Estates apts.					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	55 %
Secondary Source	Southbound Stephenson Pkwy/southbound service drive					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/60	NB 60, SB 30
Secondary Road	2	15	NA	40	25

Test 1 – 15 min.	From	6:09 P	To	6:24 P
Decibel Reading	68.9	L_{Aeq}	78.1	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	1392		190
Medium Trucks (3-axle)		26		1
Heavy Trucks		27		1
Buses		1		0
Motorcycles		2		3

NOISE DATA SHEET

						AM/PM	Site # 8
Job Number: 4207						Date: 5-29-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Hamden Cul-de-Sac North end, E of I-75, near NB off ramp to 12 Mile (northbound side)					Temp.	72 F
Receptor Represents	Single family					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	55 %
Secondary Source	NB off ramp to 12 Mile					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	28 ft.	70/65	60
Secondary Road	1	16	NA	40	

Test 1 – 15 min.	From	6:45 P	To	7:00 P
Decibel Reading	67.5	L_{Aeq}	75.6	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	video	181	
Medium Trucks (3-axle)			1	
Heavy Trucks			3	
Buses			1	
Motorcycles			4	

NOISE DATA SHEET

						AM/PM	Site # 9
Job Number: 4207						Date: 5-29-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Marie Lane, W of I-75, N of 12 Mile Road					Temp.	70 F
Receptor Represents	Mobile home park					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	55 %
Secondary Source	SB off ramp to 12 mile Road					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	65
Secondary Road	1	15	NA	40	

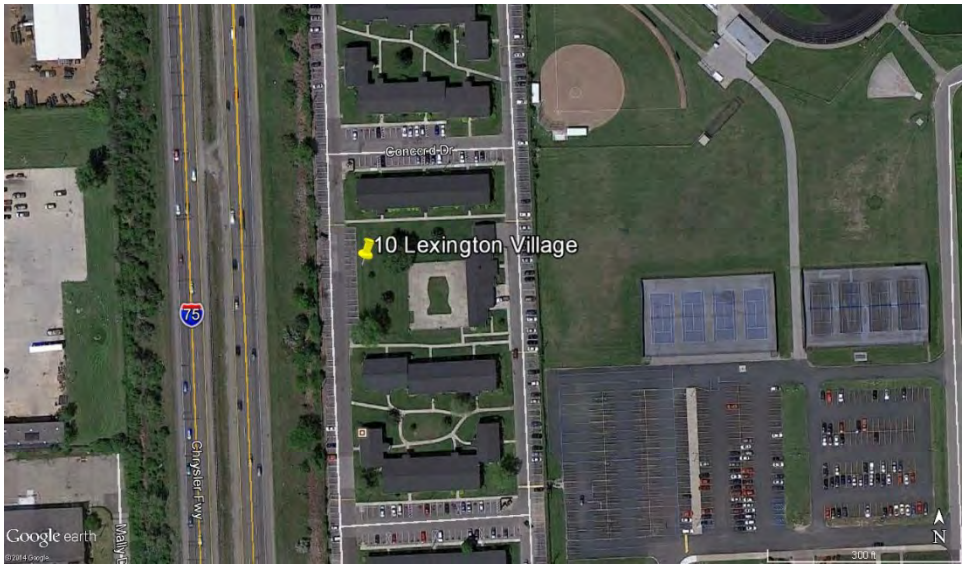
Test 1 – 15 min.	From	5:37 P	To	5:52 P
Decibel Reading	73.9	L_{Aeq}	81.7	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	785		
Medium Trucks (3-axle)		5		
Heavy Trucks		12		
Buses		1		
Motorcycles		1		

NOISE DATA SHEET

					AM/PM	Site # 10
Job Number: 4207					Date: 5-29-14	
Project: I-75 EIS					Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3					
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB			Calibration Confirmed		Yes/No
Location	Lexington Apts private road, E of I-75, at apt setbacks (northbound side)				Temp.	73 F
Receptor Represents	Lexington Village Apts				Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)				Humidity	60 %
Secondary Source	NA				Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	Wind	Upwind -1 to –5
				G-NA Undevel. lands not yet permitted		Calm –1 to +1
						Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	NB 65, SB 50
Secondary Road	NA				

Test 1 – 15 min.	From	4:58P	To	5:13 P
Decibel Reading	71.3	L_{Aeq}	77.9	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	145192	video		
Medium Trucks (3-axle)	43			
Heavy Trucks	1			
Buses	1			
Motorcycles				

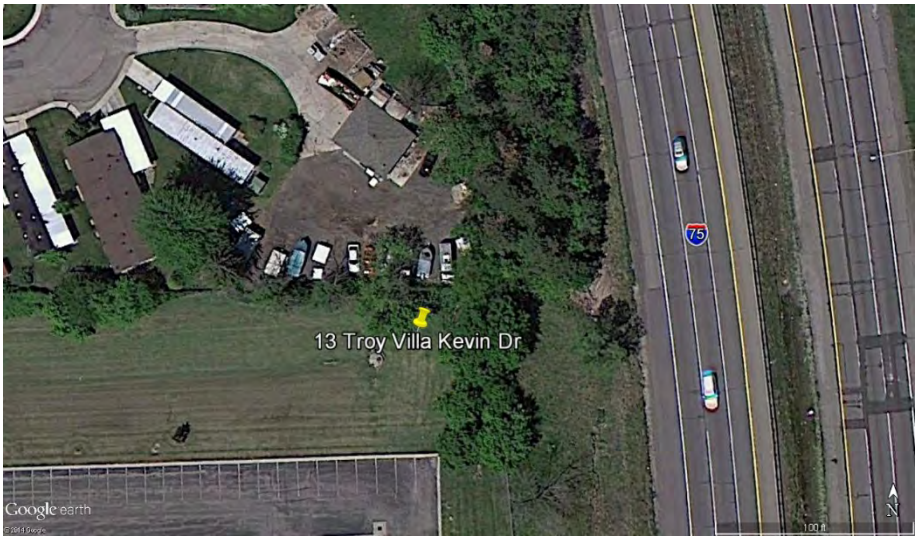


NOISE DATA SHEET

						AM/PM	Site # 13
Job Number: 4207						Date: 5-28-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Troy Villa Estates (mobile home park) setback of mobile home outside activity area from parcel adjacent to south					Temp.	72 F
Receptor Represents	Mobile Home park					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	60 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	40 variable
Secondary Road	NA				

Test 1 – 15 min.	From	4:21 P	To	4:36 P
Decibel Reading	69.8	L_{Aeq}	75.2	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	video	1224		
Medium Trucks (3-axle)		18		
Heavy Trucks		44		
Buses		1		
Motorcycles		2		



NOISE DATA SHEET

						AM/PM	Site # 14
Job Number: 4207						Date: 5-28-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Site 14 (west of Rochester Road, east of Liberty) 4th apartment's horseshoe from Rochester, at setback equivalent to nearest apartments to northbound I-75.					Temp.	75 F
Receptor Represents	54 first-floor apartments + complex to west					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	
Secondary Road	NA				

Test 1 – 15 min.	From	3:03 P	To	3:18 P
Decibel Reading	72.3	L_{Aeq}	89.1	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	1069	video		
Medium Trucks (3-axle)	31			
Heavy Trucks	28			
Buses	1			
Motorcycles	5			

NOISE DATA SHEET

						AM/PM	Site # 15
Job Number: 4207						Date: 5-28-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Site 15 Village Park Apartment complex (west of Rochester Road, east of Livernois) S side I-75,west of tennis courts at setback of nearest apts to southbound I-75					Temp.	71 F
Receptor Represents	50 first- and second-floor condos.					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	57 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	NB 65, SB 60
Secondary Road	NA				

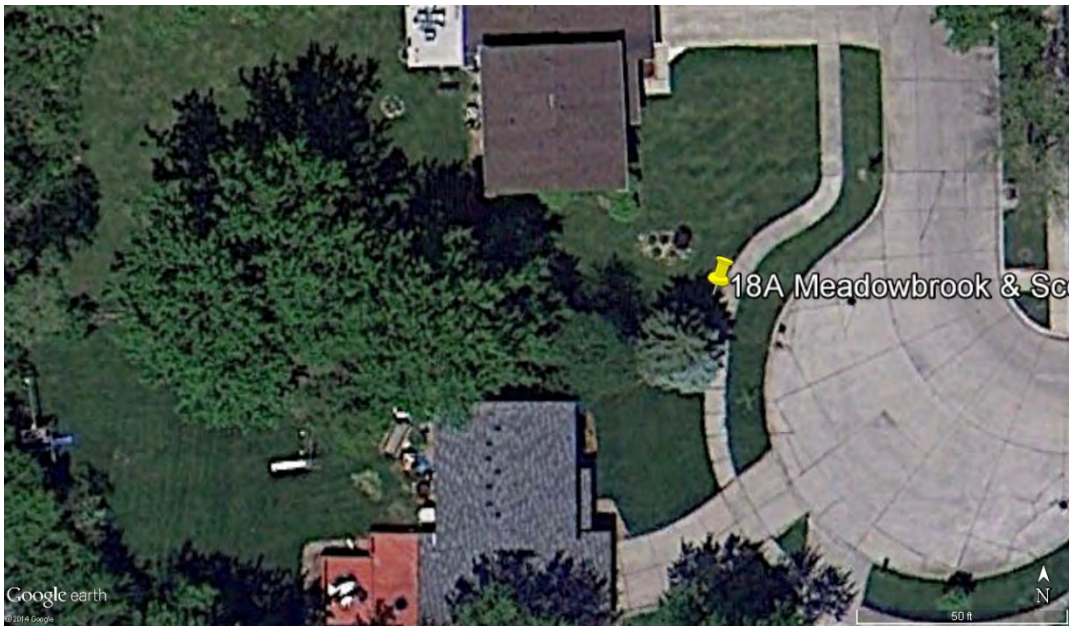
Test 1 – 15 min.	From	3:25 P	To	3:40 P
Decibel Reading	73.3	L_{Aeq}	85.4	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	1154	video		
Medium Trucks (3-axle)	14			
Heavy Trucks	30			
Buses	2			
Motorcycles	6			

NOISE DATA SHEET

						AM/PM	Site # 18A
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Meadowbrook and Scottsdale (Troy Meadows Subdivision) west sidewalk of Meadowbrook					Temp.	61 F
Receptor Represents	Homes on Meadowbrook					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (Northbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	Meadowbrook/NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	70
Secondary Road	NA				

Test 1 – 15 min.	From	10:40 A	To	10:55 A
Decibel Reading	54.9	L_{Aeq}	63.1	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	544	video		
Medium Trucks (3-axle)	25			
Heavy Trucks	49			
Buses	3			
Motorcycles	1			



NOISE DATA SHEET

						AM/PM	Site # 19
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Old Creek Rd. field behind condos					Temp.	61 F
Receptor Represents	Condos					Heavy Overcast/Light Overcast/ Sunny / Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	70
Secondary Road	NA				

Test 1 – 15 min.	From	10:08 A	To	10:23 A
Decibel Reading	69.6	L_{Aeq}	77.4	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	569	video		
Medium Trucks (3-axle)	21			
Heavy Trucks	55			
Buses	1			
Motorcycles	3			

NOISE DATA SHEET

						AM/PM	Site # 20
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Three Oaks apartment complex at the NW corner of I-75 and Wattles Rd., setback of apartments					Temp.	62 F
Receptor Represents	Apartments					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	70
Secondary Road	NA				

Test 1 – 15 min.	From	9:47 A	To	10:02 A
Decibel Reading	65.0	L_{Aeq}	71.5	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	642	video		
Medium Trucks (3-axle)	26			
Heavy Trucks	56			
Buses	5			
Motorcycles	1			

NOISE DATA SHEET

					AM/PM	Site # 21
Job Number: 4207					Date: 5-29-2014	
Project: I-75 EIS					Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3					
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB			Calibration Confirmed		Yes/No
Location	South of Hedgewood south cul-de-sac				Temp.	F
Receptor Represents	Homes being constructed 6/2014 on Hedgewood				Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)				Humidity	50 %
Secondary Source	NA				Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	Wind	Upwind -1 to –5
				G-NA Undevel. lands not yet permitted		Calm –1 to +1
						Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	70
Secondary Road	NA				

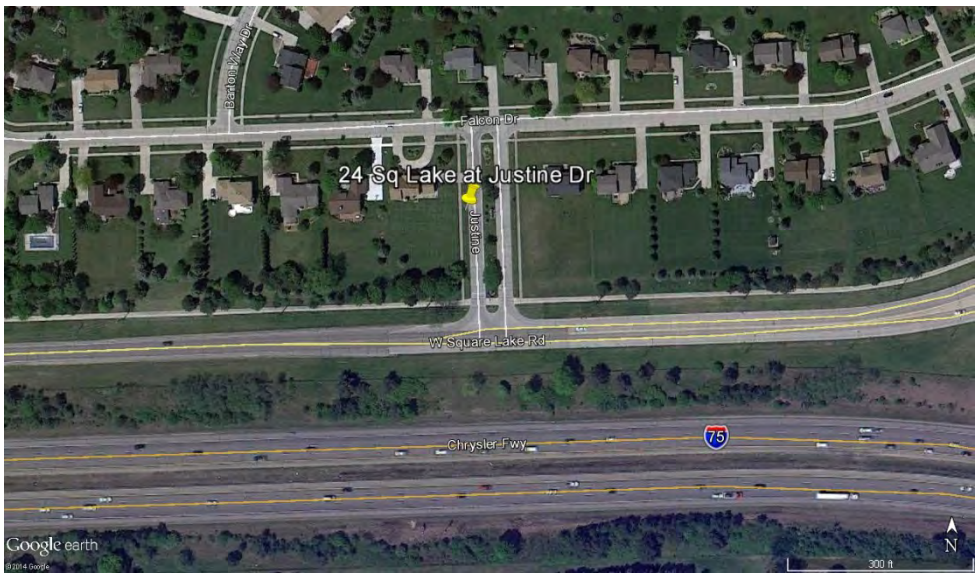
Test 1 – 15 min.	From	9:18 A	To	9:33 A
Decibel Reading	66.0	L_{Aeq}	80.9	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	683	video		
Medium Trucks (3-axle)	39			
Heavy Trucks	45			
Buses	2			
Motorcycles	1			

NOISE DATA SHEET

						AM/PM	Site # 24
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Justine Drive homes with backyards facing Square Lake Road and I-75					Temp.	59 F
Receptor Represents	Single-family dwellings.					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	Square Lake Road					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/65	NB 70, SB 55
Secondary Road	2	11		35	35

Test 1 – 15 min.	From	8:20 A	To	8:35 A
Decibel Reading	63.2	L_{Aeq}	85.8	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	783	video	26	71
Medium Trucks (3-axle)	20		1	0
Heavy Trucks	48		1	2
Buses	1		0	0
Motorcycles	1		1	0



NOISE DATA SHEET

						AM/PM	Site # 25
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Between Coolidge Rd. and Crooks Rd. east of Forest View Village subd. to rear of condos					Temp.	58 F
Receptor Represents	Single-family dwellings and condos					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/6	NB 70, SB 55
Secondary Road	NA				

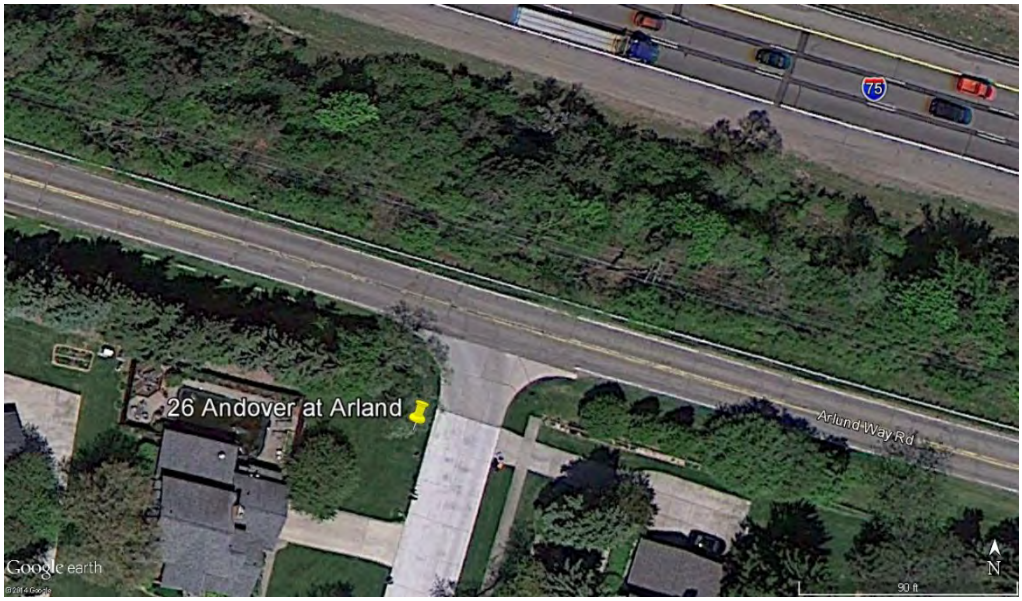
Test 1 – 15 min.	From	7:55 A	To	8:10 A
Decibel Reading	71.6	L_{Aeq}	80.0	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	853	video		
Medium Trucks (3-axle)	23			
Heavy Trucks	33			
Buses	1			
Motorcycles	1			

NOISE DATA SHEET

						AM/PM	Site # 26
Job Number: 4207						Date: 5-29-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	West side of Andover Dr. at S side of Arlund					Temp.	56 F
Receptor Represents	Single-family dwellings at various distances from I-75.					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (southbound lanes closest to noise meter)					Humidity	50 %
Secondary Source	Arlund Way					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	65
Secondary Road	2	11		35	35

Test 1 – 15 min.	From	7:26 A	To	7:41 A
Decibel Reading	67.4	L_{Aeq}	88.6	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	Two-way	SB/WB
Cars	975	video	9	
Medium Trucks (3-axle)	25		1	
Heavy Trucks	41		2	
Buses	1		1	
Motorcycles	3		0	



NOISE DATA SHEET

						AM/PM	Site # 27
Job Number: 4207						Date: 5-28-2014	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Timberview Rd near mail boxes east of Meadowglen Court					Temp.	70 F
Receptor Represents	Condominiums in Adams Woods					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	70 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/60	70
Secondary Road	NA				

Test 1 – 15 min.	From	6:30 P	To	6:45 P
Decibel Reading		L_{Aeq}		L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	836	video		
Medium Trucks (3-axle)	5			
Heavy Trucks	25			
Buses	1			
Motorcycles	1			

NOISE DATA SHEET

						AM/PM	Site # 27A
Job Number: 4207						Date: 5-28-14	
Project: I-75 EIS						Day of Week	M T W T F
Instrumentation	Quest NoisePro DLX, slow response, A-weighting, exchange rate = 3						
	Quest QC-10/QC-20 Acoustic Calibrator @ 114 dB				Calibration Confirmed		Yes/No
Location	Timberview Rd where it curves away from I-75 and dips downhill. Driveway on north side					Temp. 68	F
Receptor Represents	Condominiums in Adams Woods					Heavy Overcast/Light Overcast/ Sunny/ Clear Night/ Overcast Night	
Major Noise Source	I-75 (northbound lanes closest to noise meter)					Humidity	70 %
Secondary Source	NA					Pavement	Dry/Wet
Land Use Category	A-57dBA Serene Park	B&C-67dBA Residential/Active Park/ Hosp/Church/Section 4(f)	E-72dBA Motels/Rest./ Offices/Devel.	F-NA Agric./Manuf./ Mainten./Retail	G-NA Undevel. lands not yet permitted	Wind	Upwind -1 to –5
							Calm –1 to +1
							Downwind +1 to +5

	# Lanes	Lane Width	Median Width	Posted Speed	*Observed Speed
Major Road	3 & 3	12	48 ft.	70/65	70
Secondary Road	NA				

Test 1 – 15 min.	From	6:53 P	To	7:08 P
Decibel Reading	64.9	L_{Aeq}	81.5	L_{max}
Traffic Volumes	Major Road		Secondary Road	
	NB/EB	SB/WB	NB/EB	SB/WB
Cars	739	video		
Medium Trucks (3-axle)	10			
Heavy Trucks	11			
Buses	1			
Motorcycles	2			

APPENDIX C
NOISE METER CALIBRATION CERTIFICATES

3M Oconomowoc
Personal Safety Division

3M Detection Solutions
1060 Corporate Center Drive
Oconomowoc, WI 53066-4828
www.3M.com/detection
262 567 9157 800 245 0779
262 567 4047 Fax

An ISO 9001 Registered Company

ASSET 0040223

Certificate of Calibration

Certificate No: 5505186NXE030097

Submitted By: ARGUS-HAZCO
46410 CONTINENTAL DR
CHESTERFIELD, MI 48047

Serial Number: NXE030097
Customer ID:
Model: NOISEPRO DLX DOSIMETER

Date Received: 4/21/2014
Date Issued: 5/6/2014
Valid Until: 5/6/2015

Test Conditions:

Temperature: 18°C to 29°C
Humidity: 20% to 80%
Barometric Pressure: 890 mbar to 1050 mbar

Model Conditions:

As Found: IN TOLERANCE
As Left: IN TOLERANCE

SubAssemblies:

Description:	Serial Number:
DOSIMETER MICROPHONE CABLE ASSEMBLY	N/A

Calibrated per Procedure: 53V864

Reference Standard(s):

I.D. Number	Device	Last Calibration	Date Calibration Due
EF000099	QUEST-CAL	12/12/2013	12/12/2014
ET0000556	B&K ENSEMBLE	5/10/2013	5/10/2014

Measurement Uncertainty:

+/- 2.2% ACOUSTIC (0.19DB)
Estimated at 95% Confidence Level (k=2)

Calibrated By: Robert W Workentine 5/6/2014
ROBERT WORKENTINE Service Technician

This report certifies that all calibration equipment used in the test is traceable to NIST, and applies only to the unit identified under equipment above. This report must not be reproduced except in its entirety without the written approval of 3M Detection Solutions.

ARGUS-HAZCO

Certificate of Compliance and Calibration

	Certificate Number	5/19/2014 - 1081	
Make/Model	QC-10	**Cal Date:**	5/19/2014
Asset#	0040306	**Next Cal Due:**	5/19/2015
Serial Number	QE8100340		

Argus-Hazco does hereby certify that the above listed equipment is to be in physical, mechanical working order and within the manufacturer's acceptable limits. Each unit is tested and inspected in accordance with prescribed procedures before each rental.

This report may be reproduced in its entirety only with written approval of Argus-Hazco

Notes

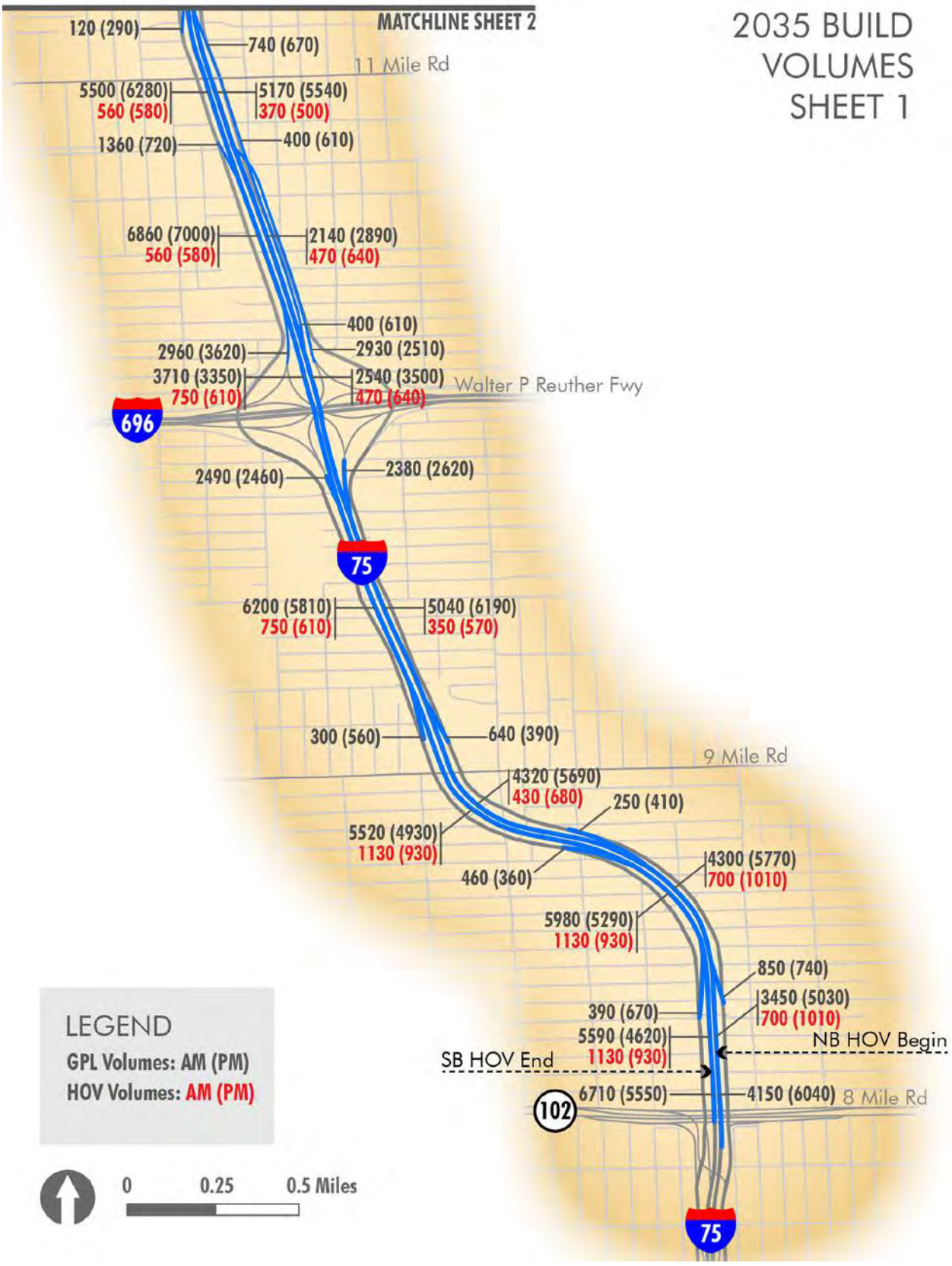
Location	Detroit, MI	***Asset Released In Tolerance***	☑
Technician	DS	***All Tests Passed***	☑
Date	5/19/2014		
Time	9:44:46 AM		
SOP#			

Quality Control: **Date:** 5/22/14

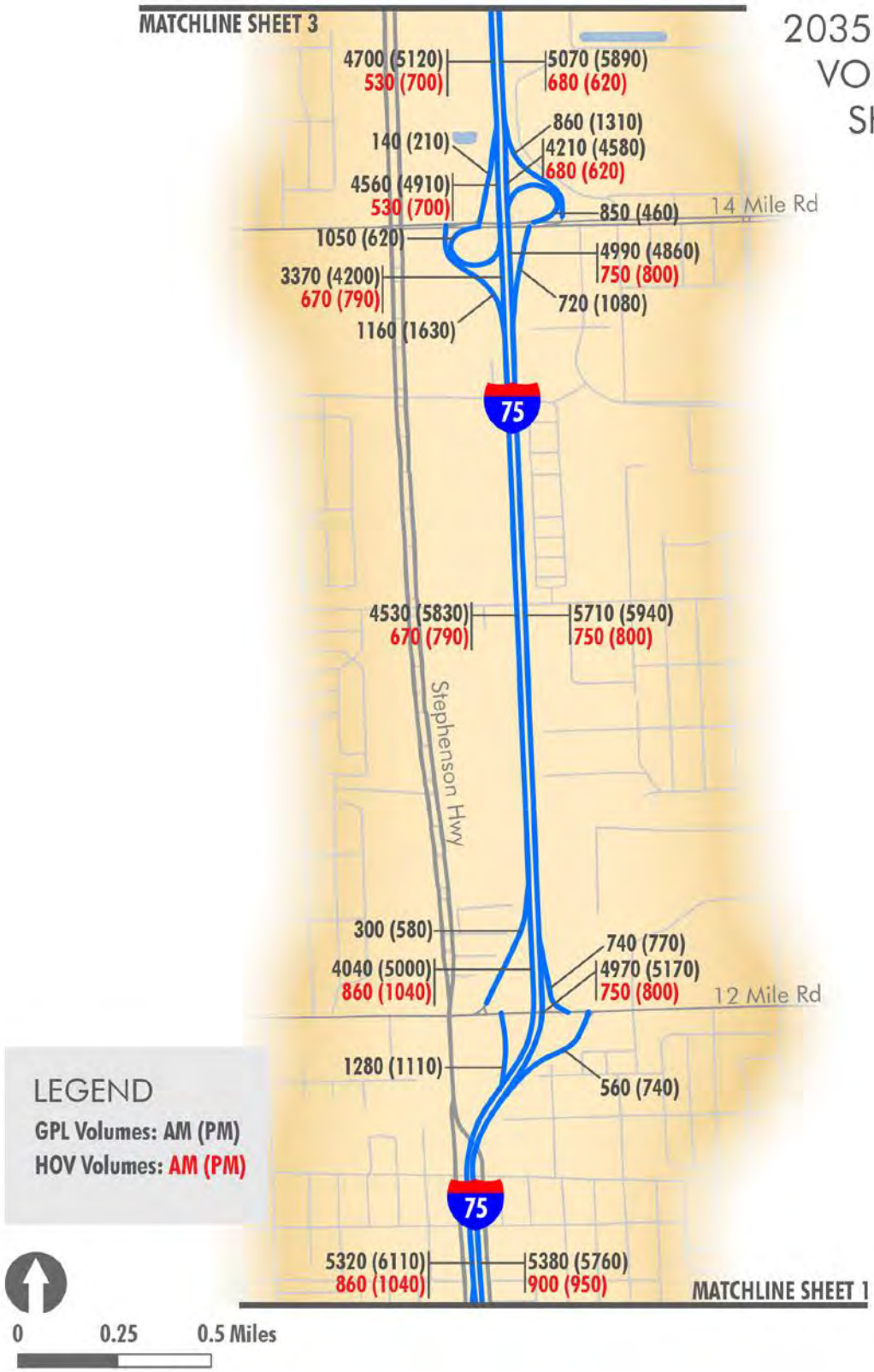
Please Note: All tests performed with NIST Traceable test and measurement equipment at ambient room temperature, humidity, and pressure at the location listed above. Time in transit or any change in temperature, pressure, humidity, or elevation may result in changes to the calibration values listed. Performance of a field calibration is recommended prior to each use; refer to owner's manual for calibration procedures. Use of this test sheet constitutes proof that the testing environment was within manufacturers' limitation and the instrument conforms to manufacturers' specification.

APPENDIX D
2035 TRAFFIC FORECASTS

2035 BUILD VOLUMES SHEET 1



2035 BUILD VOLUMES SHEET 2



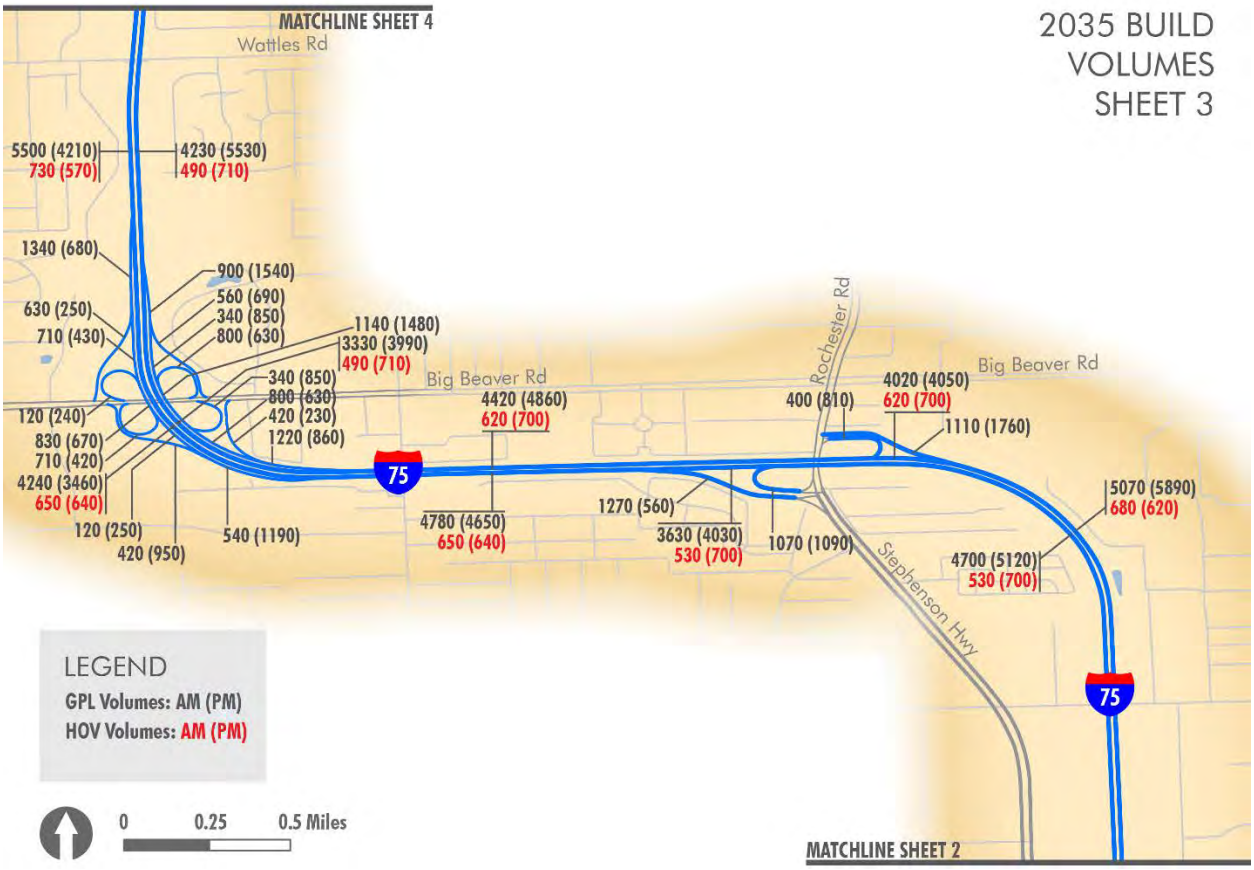
LEGEND

GPL Volumes: AM (PM)

HOV Volumes: AM (PM)

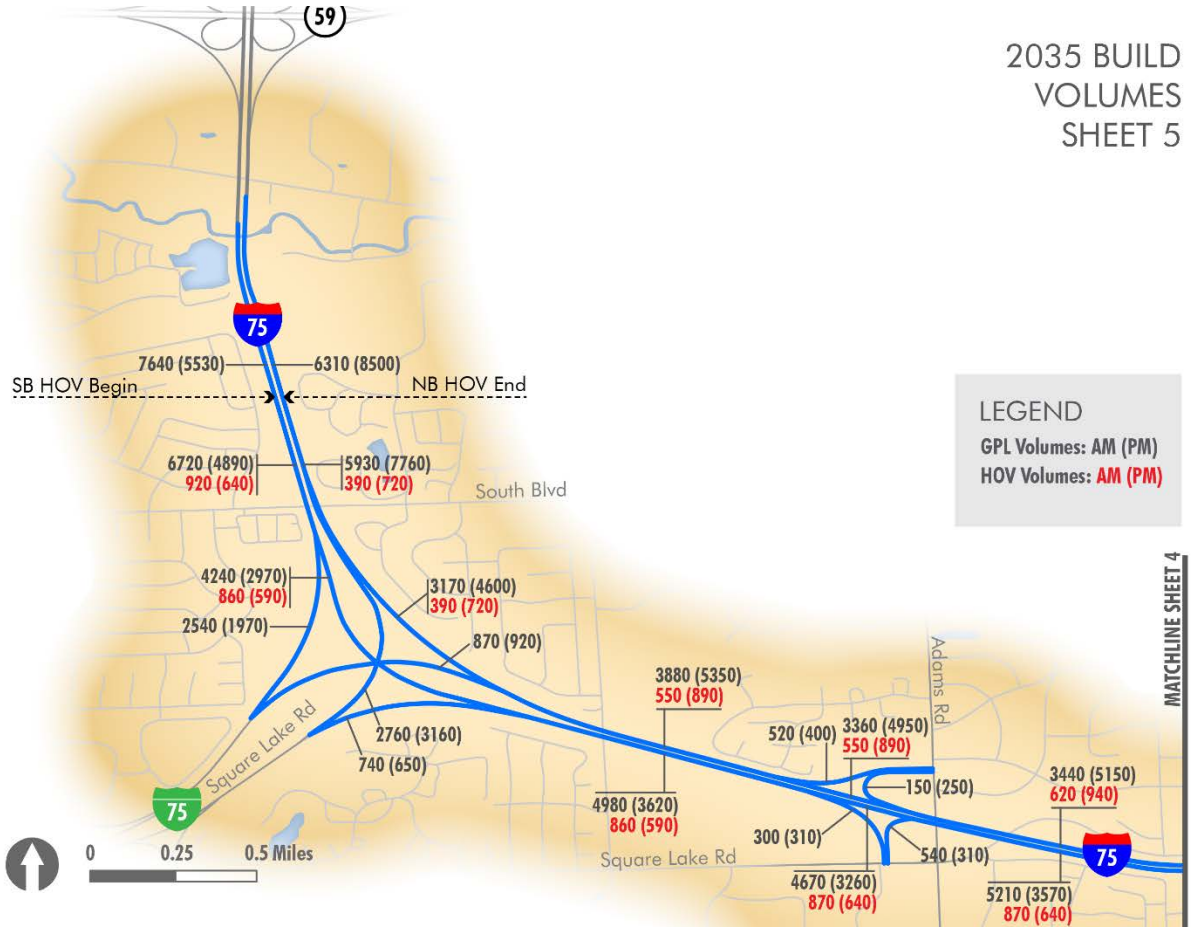
0 0.25 0.5 Miles

2035 BUILD VOLUMES SHEET 3



2035 BUILD VOLUMES SHEET 4

2035 BUILD VOLUMES SHEET 5



APPEDNDIX E

DWELLING UNIT EQUIVALENT CALCULATIONS

Appendix XX. Dwelling Unit Equivalent Calculation Tables.

Places of Worship

	Capacity	Average Persons Per Household	Usage		DUEs	SQFT	SQFT Per Person	Capacity	# of Daily Hours Used	Hours per Day	Days Used Per Year	Days per Year	Usage
Tabernacle of Praise	400	3	0.05	6.94	7	3200	8	400	4	24	114	365	0.05
Landmark Community Church	1719	3	0.05	29.83	30	13,750	8	1719	4	24	114	365	0.05
Serenity Christian Church	450	3	0.05	7.81	8	3600	8	450	4	24	114	365	0.05
First Free Will Baptist Church	525	3	0.05	9.11	10	4200	8	525	4	24	114	365	0.05
Tabernacle Baptist	788	3	0.05	13.67	14	6300	8	788	4	24	114	365	0.05
First Baptist	350	3	0.05	6.07	7	2800	8	350	4	24	114	365	0.05
New Beginning General Baptist	400	3	0.05	6.94	7	3200	8	400	4	24	114	365	0.05

(Capacity/Average Persons per Household) * Usage = DUEs
SQFT/SQFT per Person = Capacity
((# of Daily Hours used/Hours per day) * (Days Used per Year/Days per Year)) = Usage

Schools

	Enrollment	Average Persons Per Household	Usage		DUEs
Roosevelt Elementary	120	3	0.18	7.31	8
United Oaks Elementary	350	3	0.18	21.31	22
Hazel Park Junior High	710	3	0.18	43.23	44

# of Daily Hours Used	Hours per Day	Days Used Per Year	Days per Year	Usage
8	24	200	365	0.18
8	24	200	365	0.18
8	24	200	365	0.18

(Enrollment/Average Persons per Household) * Usage = DUEs
((# of Daily Hours used/Hours per day) * (Days Used per Year/Days per Year)) = Usage

Parks

	SQFT of Impact Area	SQFT of Typical Lot		DUEs
Huber Park	595,000	15,950	37.30	38
Firefighters Park	480,000	13,500	35.56	36

SQFT of Impact Area/SQFT of Typical Lot = DUEs

Heathers Golf Club

	Players Per Day	Average Persons Per Household	Usage		DUEs
Heathers Club	240	3	0.31	24.66	25

Players per Hour	Hours per Day	Players per Day
24	10	240

# of Daily Hours Used	Hours per Day	Days Used Per Year	Days per Year	Usage
10	24	270	365	0.31

(Players per Day/Average Persons per Household) * Usage = DUEs
Players per Hour * Hours per Day = Players per Day
((# of Daily Hours used/Hours per day) * (Days Used per Year/Days per Year)) = Usage

APPENDIX F
SOUND LEVEL RESULTS FOR ALL RECEIVERS PRIOR TO NOISE WALL ANALYSIS

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Segment 1 - PB Design
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	61.8	66	61.8	10	----	61.8	0.0	5	-5.0
Receiver2	2	1	0.0	72.4	66	72.4	10	Snd Lvl	72.3	0.1	5	-4.9
Receiver3	3	1	0.0	63.3	66	63.3	10	----	63.4	-0.1	5	-5.1
Receiver4	4	1	0.0	59.8	66	59.8	10	----	59.3	0.5	5	-4.5
Receiver5	5	1	0.0	72.5	66	72.5	10	Snd Lvl	72.3	0.2	5	-4.8
Receiver6	6	1	0.0	59.9	66	59.9	10	----	59.9	0.0	5	-5.0
Receiver7	7	1	0.0	57.9	66	57.9	10	----	57.9	0.0	5	-5.0
Receiver8	8	1	0.0	72.8	66	72.8	10	Snd Lvl	71.8	1.0	5	-4.0
Receiver9	9	1	0.0	64.7	66	64.7	10	----	63.3	1.4	5	-3.6
Receiver10	10	1	0.0	57.3	66	57.3	10	----	55.8	1.5	5	-3.5
Receiver11	11	1	0.0	64.7	66	64.7	10	----	63.1	1.6	5	-3.4
Receiver12	12	1	0.0	72.0	66	72.0	10	Snd Lvl	71.5	0.5	5	-4.5
Receiver13	13	1	0.0	76.8	66	76.8	10	Snd Lvl	70.2	6.6	5	1.6
Receiver14	14	1	0.0	64.3	66	64.3	10	----	59.5	4.8	5	-0.2
Receiver15	15	1	0.0	59.5	66	59.5	10	----	56.2	3.3	5	-1.7
Receiver16	16	1	0.0	65.1	66	65.1	10	----	58.3	6.8	5	1.8
Receiver17	17	1	0.0	65.7	66	65.7	10	----	60.7	5.0	5	0.0
Receiver18	18	1	0.0	67.3	66	67.3	10	Snd Lvl	60.9	6.4	5	1.4
Receiver19	19	1	0.0	76.9	66	76.9	10	Snd Lvl	70.4	6.5	5	1.5
Receiver20	20	1	0.0	71.7	66	71.7	10	Snd Lvl	63.2	8.5	5	3.5
Receiver21	21	1	0.0	69.2	66	69.2	10	Snd Lvl	60.6	8.6	5	3.6
Receiver22	22	1	0.0	66.7	66	66.7	10	Snd Lvl	59.1	7.6	5	2.6
Receiver23	23	1	0.0	67.0	66	67.0	10	Snd Lvl	59.1	7.9	5	2.9

Receiver24	24	1	0.0	68.7	66	68.7	10	Snd Lvl	60.6	8.1	5	3.1
Receiver25	25	1	0.0	72.0	66	72.0	10	Snd Lvl	63.0	9.0	5	4.0
Receiver26	26	1	0.0	72.2	66	72.2	10	Snd Lvl	63.7	8.5	5	3.5
Receiver27	27	1	0.0	67.0	66	67.0	10	Snd Lvl	59.8	7.2	5	2.2
Receiver28	28	1	0.0	66.4	66	66.4	10	Snd Lvl	59.1	7.3	5	2.3
Receiver29	29	1	0.0	74.2	66	74.2	10	Snd Lvl	64.8	9.4	5	4.4
Receiver30	30	1	0.0	74.0	66	74.0	10	Snd Lvl	65.4	8.6	5	3.6
Receiver31	31	1	0.0	67.1	66	67.1	10	Snd Lvl	59.4	7.7	5	2.7
Receiver32	32	1	0.0	59.6	66	59.6	10	----	56.0	3.6	5	-1.4
Receiver33	33	1	0.0	59.1	66	59.1	10	----	55.8	3.3	5	-1.7
Receiver34	34	1	0.0	61.7	66	61.7	10	----	57.2	4.5	5	-0.5
Receiver35	35	1	0.0	65.9	66	65.9	10	----	59.1	6.8	5	1.8
Receiver36	36	1	0.0	76.0	66	76.0	10	Snd Lvl	66.8	9.2	5	4.2
Receiver37	37	1	0.0	72.2	66	72.2	10	Snd Lvl	65.3	6.9	5	1.9
Receiver38	38	1	0.0	64.2	66	64.2	10	----	59.9	4.3	5	-0.7
Receiver39	39	1	0.0	61.8	66	61.8	10	----	58.5	3.3	5	-1.7
Receiver40	40	1	0.0	59.4	66	59.4	10	----	55.7	3.7	5	-1.3
Receiver41	41	1	0.0	62.8	66	62.8	10	----	57.7	5.1	5	0.1
Receiver42	42	1	0.0	71.2	66	71.2	10	Snd Lvl	63.4	7.8	5	2.8
Receiver43	43	1	0.0	69.5	66	69.5	10	Snd Lvl	64.0	5.5	5	0.5
Receiver44	44	1	0.0	65.1	66	65.1	10	----	60.8	4.3	5	-0.7
Receiver45	45	1	0.0	52.4	66	52.4	10	----	51.1	1.3	5	-3.7
Receiver46	46	1	0.0	55.1	66	55.1	10	----	53.6	1.5	5	-3.5
Receiver47	47	1	0.0	61.1	66	61.1	10	----	57.9	3.2	5	-1.8
Receiver48	48	1	0.0	63.1	66	63.1	10	----	60.8	2.3	5	-2.7
Receiver49	49	1	0.0	57.0	66	57.0	10	----	56.1	0.9	5	-4.1
Receiver50	50	1	0.0	55.0	66	55.0	10	----	53.0	2.0	5	-3.0
Receiver51	51	1	0.0	64.4	66	64.4	10	----	60.5	3.9	5	-1.1
Receiver52	52	1	0.0	63.1	66	63.1	10	----	63.0	0.1	5	-4.9
Receiver53	53	1	0.0	64.0	66	64.0	10	----	63.1	0.9	5	-4.1
Receiver54	54	1	0.0	62.1	66	62.1	10	----	60.8	1.3	5	-3.7
Receiver55	55	1	0.0	62.8	66	62.8	10	----	60.3	2.5	5	-2.5
Receiver56	56	1	0.0	66.7	66	66.7	10	Snd Lvl	63.1	3.6	5	-1.4
Receiver57	57	1	0.0	57.1	66	57.1	10	----	54.3	2.8	5	-2.2
Receiver58	58	1	0.0	64.9	66	64.9	10	----	59.9	5.0	5	0.0
Receiver59	59	1	0.0	68.3	66	68.3	10	Snd Lvl	61.7	6.6	5	1.6
Receiver60	60	1	0.0	61.6	66	61.6	10	----	57.4	4.2	5	-0.8
Receiver61	61	1	0.0	68.1	66	68.1	10	Snd Lvl	61.1	7.0	5	2.0
Receiver62	62	1	0.0	61.5	66	61.5	10	----	56.2	5.3	5	0.3
Receiver63	63	1	0.0	69.3	66	69.3	10	Snd Lvl	62.4	6.9	5	1.9
Receiver64	64	1	0.0	61.1	66	61.1	10	----	55.5	5.6	5	0.6

Receiver65	65	1	0.0	53.8	66	53.8	10	-----	53.5	0.3	5	-4.7
Receiver66	66	1	0.0	57.0	66	57.0	10	-----	54.9	2.1	5	-2.9
Receiver67	67	1	0.0	58.3	66	58.3	10	-----	57.9	0.4	5	-4.6
Receiver68	68	1	0.0	74.4	66	74.4	10	Snd Lvl	74.3	0.1	5	-4.9
Receiver69	69	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	5	-5.0
Receiver70	70	1	0.0	74.6	66	74.6	10	Snd Lvl	74.5	0.1	5	-4.9
Receiver71	71	1	0.0	66.2	66	66.2	10	Snd Lvl	66.1	0.1	5	-4.9
Receiver72	72	1	0.0	74.0	66	74.0	10	Snd Lvl	74.0	0.0	5	-5.0
Receiver73	73	1	0.0	67.1	66	67.1	10	Snd Lvl	67.0	0.1	5	-4.9
Receiver74	74	1	0.0	58.8	66	58.8	10	-----	58.7	0.1	5	-4.9
Receiver75	75	1	0.0	70.2	66	70.2	10	Snd Lvl	70.2	0.0	5	-5.0
Receiver76	76	1	0.0	63.3	66	63.3	10	-----	63.2	0.1	5	-4.9
Receiver77	77	1	0.0	63.8	66	63.8	10	-----	63.8	0.0	5	-5.0
Receiver78	78	1	0.0	73.1	66	73.1	10	Snd Lvl	73.1	0.0	5	-5.0
Receiver79	79	1	0.0	68.7	66	68.7	10	Snd Lvl	68.7	0.0	5	-5.0
Receiver80	80	1	0.0	57.6	66	57.6	10	-----	53.9	3.7	5	-1.3
Receiver81	81	1	0.0	56.2	66	56.2	10	-----	55.3	0.9	5	-4.1
Receiver82	82	1	0.0	65.0	66	65.0	10	-----	65.0	0.0	5	-5.0
Receiver83	83	1	0.0	74.9	66	74.9	10	Snd Lvl	74.9	0.0	5	-5.0
Receiver84	84	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	5	-5.0
Receiver85	85	1	0.0	64.4	66	64.4	10	-----	64.3	0.1	5	-4.9
Receiver86	86	1	0.0	73.4	66	73.4	10	Snd Lvl	73.4	0.0	5	-5.0
Receiver87	87	1	0.0	62.1	66	62.1	10	-----	62.1	0.0	5	-5.0
Receiver88	88	1	0.0	62.2	66	62.2	10	-----	62.2	0.0	5	-5.0
Receiver89	89	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	5	-5.0
Receiver90	90	1	0.0	63.6	66	63.6	10	-----	63.6	0.0	5	-5.0
Receiver91	91	1	0.0	59.4	66	59.4	10	-----	59.4	0.0	5	-5.0
Receiver92	92	1	0.0	63.7	66	63.7	10	-----	63.7	0.0	5	-5.0
Receiver93	93	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	5	-5.0
Receiver94	94	1	0.0	62.4	66	62.4	10	-----	62.3	0.1	5	-4.9
Receiver95	95	1	0.0	62.6	66	62.6	10	-----	62.6	0.0	5	-5.0
Receiver96	96	1	0.0	61.3	66	61.3	10	-----	61.3	0.0	5	-5.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	96	-0.1	3.0	9.4
All Impacted	41	0.0	4.2	9.4
All that meet NR Goal	28	5.0	7.2	9.4

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg2 - Meyers to John R - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
First Free Will Baptist Church	3	9	0.0	74.9	66	74.9	10	Snd Lvl	67.3	7.6	5	2.6
Tabernacle Baptist	22	14	0.0	72.8	66	72.8	10	Snd Lvl	72.8	0.0	5	-5.0
Receiver25	25	1	0.0	71.0	66	71.0	10	Snd Lvl	65.8	5.2	5	0.2
Receiver28	28	1	0.0	68.1	66	68.1	10	Snd Lvl	63.0	5.1	5	0.1
Receiver29	29	1	0.0	72.1	66	72.1	10	Snd Lvl	64.5	7.6	5	2.6
Receiver30	30	1	0.0	75.8	66	75.8	10	Snd Lvl	66.7	9.1	5	4.1
Receiver31	31	1	0.0	74.4	66	74.4	10	Snd Lvl	64.5	9.9	5	4.9
Receiver33	33	1	0.0	70.9	66	70.9	10	Snd Lvl	62.8	8.1	5	3.1
Receiver35	35	1	0.0	70.9	66	70.9	10	Snd Lvl	63.5	7.4	5	2.4
Receiver38	38	1	0.0	67.2	66	67.2	10	Snd Lvl	61.9	5.3	5	0.3
Receiver54	54	1	0.0	69.1	66	69.1	10	Snd Lvl	65.0	4.1	5	-0.9
Receiver56	56	1	0.0	67.9	66	67.9	10	Snd Lvl	59.7	8.2	5	3.2
Receiver58	58	1	0.0	65.9	66	65.9	10	-----	59.0	6.9	5	1.9
Receiver60	60	1	0.0	65.6	66	65.6	10	-----	59.9	5.7	5	0.7
United Oaks Elementary	73	21	0.0	56.0	66	56.0	10	-----	51.0	5.0	5	0.0
Hazel Park Jr High	74	43	0.0	53.0	66	53.0	10	-----	49.8	3.2	5	-1.8
Receiver76	76	1	0.0	67.8	66	67.8	10	Snd Lvl	62.3	5.5	5	0.5
Receiver78	78	1	0.0	69.1	66	69.1	10	Snd Lvl	63.7	5.4	5	0.4
Receiver79	79	1	0.0	70.7	66	70.7	10	Snd Lvl	64.3	6.4	5	1.4
Receiver81	81	1	0.0	66.3	66	66.3	10	Snd Lvl	61.5	4.8	5	-0.2
Receiver83	83	1	0.0	66.5	66	66.5	10	Snd Lvl	59.8	6.7	5	1.7
Receiver85	85	1	0.0	68.3	66	68.3	10	Snd Lvl	65.7	2.6	5	-2.4
Receiver86	86	1	0.0	63.6	66	63.6	10	-----	61.1	2.5	5	-2.5

Receiver87	87	1	0.0	59.7	66	59.7	10	-----	58.1	1.6	5	-3.4
Receiver88	88	1	0.0	69.3	66	69.3	10	Snd Lvl	65.1	4.2	5	-0.8
Receiver89	89	1	0.0	60.6	66	60.6	10	----	57.8	2.8	5	-2.2
Receiver90	90	1	0.0	57.2	66	57.2	10	----	55.7	1.5	5	-3.5
Receiver91	91	1	0.0	72.6	66	72.6	10	Snd Lvl	64.5	8.1	5	3.1
Receiver92	92	1	0.0	65.9	66	65.9	10	----	59.3	6.6	5	1.6
Receiver93	93	1	0.0	62.6	66	62.6	10	----	56.6	6.0	5	1.0
Receiver94	94	1	0.0	59.3	66	59.3	10	----	54.8	4.5	5	-0.5
Receiver95	95	1	0.0	57.8	66	57.8	10	----	53.5	4.3	5	-0.7
Receiver97	97	1	0.0	73.7	66	73.7	10	Snd Lvl	65.1	8.6	5	3.6
Receiver98	98	1	0.0	72.3	66	72.3	10	Snd Lvl	63.8	8.5	5	3.5
Receiver99	99	1	0.0	71.5	66	71.5	10	Snd Lvl	62.4	9.1	5	4.1
Receiver100	100	1	0.0	70.0	66	70.0	10	Snd Lvl	61.3	8.7	5	3.7
Receiver101	101	1	0.0	68.3	66	68.3	10	Snd Lvl	60.3	8.0	5	3.0
Receiver102	102	1	0.0	66.2	66	66.2	10	Snd Lvl	58.9	7.3	5	2.3
Receiver103	103	1	0.0	75.4	66	75.4	10	Snd Lvl	65.3	10.1	5	5.1
Receiver104	104	1	0.0	73.1	66	73.1	10	Snd Lvl	63.3	9.8	5	4.8
Receiver105	105	1	0.0	68.0	66	68.0	10	Snd Lvl	60.8	7.2	5	2.2
Receiver106	106	1	0.0	68.0	66	68.0	10	Snd Lvl	60.5	7.5	5	2.5
Receiver107	107	1	0.0	68.1	66	68.1	10	Snd Lvl	60.5	7.6	5	2.6
Receiver108	108	1	0.0	67.4	66	67.4	10	Snd Lvl	59.6	7.8	5	2.8
Receiver109	109	1	0.0	66.1	66	66.1	10	Snd Lvl	58.8	7.3	5	2.3
Receiver110	110	1	0.0	64.0	66	64.0	10	-----	57.8	6.2	5	1.2
Receiver111	111	1	0.0	63.0	66	63.0	10	----	57.0	6.0	5	1.0
Receiver114	114	1	0.0	73.5	66	73.5	10	Snd Lvl	65.7	7.8	5	2.8
Receiver115	115	1	0.0	72.2	66	72.2	10	Snd Lvl	64.0	8.2	5	3.2
Receiver116	116	1	0.0	71.2	66	71.2	10	Snd Lvl	63.9	7.3	5	2.3
Receiver117	117	1	0.0	66.6	66	66.6	10	Snd Lvl	60.2	6.4	5	1.4
Receiver118	118	1	0.0	65.2	66	65.2	10	----	59.0	6.2	5	1.2
Receiver119	119	1	0.0	64.3	66	64.3	10	----	58.1	6.2	5	1.2
Receiver120	120	1	0.0	62.6	66	62.6	10	-----	57.0	5.6	5	0.6
Receiver121	121	1	0.0	61.3	66	61.3	10	----	56.2	5.1	5	0.1
Receiver123	123	1	0.0	74.4	66	74.4	10	Snd Lvl	68.2	6.2	5	1.2
Receiver124	124	1	0.0	71.0	66	71.0	10	Snd Lvl	66.9	4.1	5	-0.9
Receiver125	125	1	0.0	70.9	66	70.9	10	Snd Lvl	66.2	4.7	5	-0.3
Receiver126	126	1	0.0	68.4	66	68.4	10	Snd Lvl	63.7	4.7	5	-0.3
Receiver127	127	1	0.0	65.7	66	65.7	10	----	61.0	4.7	5	-0.3
Receiver128	128	1	0.0	62.0	66	62.0	10	----	57.7	4.3	5	-0.7
Receiver129	129	1	0.0	59.5	66	59.5	10	----	56.1	3.4	5	-1.6
Receiver130	130	1	0.0	58.2	66	58.2	10	----	54.2	4.0	5	-1.0
Receiver131	131	1	0.0	56.8	66	56.8	10	-----	54.2	2.6	5	-2.4

Receiver132	132	1	0.0	55.5	66	55.5	10	----	54.0	1.5	5	-3.5
Receiver133	133	1	0.0	55.7	66	55.7	10	----	53.8	1.9	5	-3.1
Receiver134	134	1	0.0	56.7	66	56.7	10	----	54.1	2.6	5	-2.4
Receiver135	135	1	0.0	73.9	66	73.9	10	Snd Lvl	66.9	7.0	5	2.0
Receiver136	136	1	0.0	71.9	66	71.9	10	Snd Lvl	65.4	6.5	5	1.5
Receiver137	137	1	0.0	70.9	66	70.9	10	Snd Lvl	64.7	6.2	5	1.2
Receiver138	138	1	0.0	70.0	66	70.0	10	Snd Lvl	64.4	5.6	5	0.6
Receiver139	139	1	0.0	69.3	66	69.3	10	Snd Lvl	64.5	4.8	5	-0.2
Receiver140	140	1	0.0	68.3	66	68.3	10	Snd Lvl	62.9	5.4	5	0.4
Receiver141	141	1	0.0	65.2	66	65.2	10	----	65.1	0.1	5	-4.9
Receiver142	142	1	0.0	64.8	66	64.8	10	----	60.4	4.4	5	-0.6
Receiver143	143	1	0.0	65.8	66	65.8	10	----	62.8	3.0	5	-2.0
Receiver144	144	1	0.0	65.5	66	65.5	10	----	61.9	3.6	5	-1.4
Receiver145	145	1	0.0	61.5	66	61.5	10	----	57.2	4.3	5	-0.7
Receiver146	146	1	0.0	61.2	66	61.2	10	----	57.4	3.8	5	-1.2
Receiver147	147	1	0.0	60.2	66	60.2	10	----	56.3	3.9	5	-1.1
Receiver148	148	1	0.0	57.8	66	57.8	10	----	54.5	3.3	5	-1.7
Receiver149	149	1	0.0	59.0	66	59.0	10	----	54.7	4.3	5	-0.7
Receiver150	150	1	0.0	58.0	66	58.0	10	----	54.0	4.0	5	-1.0
Receiver151	151	1	0.0	55.7	66	55.7	10	----	53.7	2.0	5	-3.0
Receiver152	152	1	0.0	57.1	66	57.1	10	----	53.7	3.4	5	-1.6
Receiver153	153	1	0.0	56.0	66	56.0	10	----	53.0	3.0	5	-2.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	169	0.0	5.4	10.1
All Impacted	68	0.0	6.7	10.1
All that meet NR Goal	77	5.0	7.0	10.1

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg3 - 9 Mile to Woodward Hts - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	1	0.0	72.6	66	72.6	10	Snd Lvl	72.5	0.1	5	-4.9
Receiver3	3	1	0.0	74.3	66	74.3	10	Snd Lvl	67.6	6.7	5	1.7
Receiver4	4	1	0.0	68.0	66	68.0	10	Snd Lvl	64.2	3.8	5	-1.2
Receiver5	5	1	0.0	65.2	66	65.2	10	----	60.8	4.4	5	-0.6
Receiver6	6	1	0.0	74.5	66	74.5	10	Snd Lvl	67.2	7.3	5	2.3
Receiver7	7	1	0.0	69.5	66	69.5	10	Snd Lvl	63.5	6.0	5	1.0
Receiver8	8	1	0.0	67.8	66	67.8	10	Snd Lvl	61.1	6.7	5	1.7
Receiver9	9	1	0.0	74.3	66	74.3	10	Snd Lvl	66.3	8.0	5	3.0
Receiver10	10	1	0.0	67.9	66	67.9	10	Snd Lvl	60.7	7.2	5	2.2
Receiver11	11	1	0.0	63.0	66	63.0	10	----	57.3	5.7	5	0.7
Receiver12	12	1	0.0	73.3	66	73.3	10	Snd Lvl	65.5	7.8	5	2.8
Receiver13	13	1	0.0	70.0	66	70.0	10	Snd Lvl	62.1	7.9	5	2.9
Receiver14	14	1	0.0	66.5	66	66.5	10	Snd Lvl	59.3	7.2	5	2.2
Receiver16	16	1	0.0	73.7	66	73.7	10	Snd Lvl	66.0	7.7	5	2.7
Receiver17	17	1	0.0	68.0	66	68.0	10	Snd Lvl	61.4	6.6	5	1.6
Receiver18	18	1	0.0	64.8	66	64.8	10	----	58.3	6.5	5	1.5
Receiver19	19	1	0.0	73.0	66	73.0	10	Snd Lvl	65.7	7.3	5	2.3
Receiver20	20	1	0.0	69.0	66	69.0	10	Snd Lvl	62.3	6.7	5	1.7
Receiver21	21	1	0.0	66.6	66	66.6	10	Snd Lvl	60.1	6.5	5	1.5
Receiver25	25	1	0.0	69.3	66	69.3	10	Snd Lvl	63.1	6.2	5	1.2
Receiver26	26	1	0.0	62.2	66	62.2	10	----	57.3	4.9	5	-0.1
Receiver27	27	1	0.0	73.0	66	73.0	10	Snd Lvl	66.9	6.1	5	1.1
Receiver28	28	1	0.0	69.2	66	69.2	10	Snd Lvl	63.3	5.9	5	0.9

Receiver29	29	1	0.0	66.2	66	66.2	10	Snd Lvl	60.3	5.9	5	0.9
Receiver30	30	1	0.0	70.2	66	70.2	10	Snd Lvl	64.6	5.6	5	0.6
Receiver31	31	1	0.0	62.4	66	62.4	10	----	58.9	3.5	5	-1.5
Receiver33	33	1	0.0	66.5	66	66.5	10	Snd Lvl	66.1	0.4	5	-4.6
Receiver34	34	1	0.0	63.0	66	63.0	10	----	62.8	0.2	5	-4.8
Receiver35	35	1	0.0	68.1	66	68.1	10	Snd Lvl	67.0	1.1	5	-3.9
Receiver36	36	1	0.0	69.3	66	69.3	10	Snd Lvl	67.0	2.3	5	-2.7
Receiver38	38	1	0.0	65.0	66	65.0	10	----	59.7	5.3	5	0.3
Receiver40	40	1	0.0	65.5	66	65.5	10	----	59.6	5.9	5	0.9
Receiver41	41	8	0.0	75.6	66	75.6	10	Snd Lvl	67.4	8.2	5	3.2
Receiver42	42	1	0.0	64.2	66	64.2	10	----	59.5	4.7	5	-0.3
Receiver43	43	2	0.0	75.2	66	75.2	10	Snd Lvl	69.3	5.9	5	0.9
First Baptist Chuch	45	6	0.0	73.2	51	73.2	10	Snd Lvl	73.1	0.1	5	-4.9
Receiver50 2nd Floor	50	2	0.0	78.6	66	78.6	10	Snd Lvl	72.5	6.1	5	1.1
Receiver51 2nd Floor	51	8	0.0	79.6	66	79.6	10	Snd Lvl	72.4	7.2	5	2.2

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	59	0.1	5.4	8.2
All Impacted	50	0.1	5.7	8.2
All that meet NR Goal	43	5.3	6.7	8.2

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg4 - Woodward Hts to I-696 - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	67.6	66	67.6	10	Snd Lvl	66.3	1.3	5	-3.7
Receiver2	2	1	0.0	69.7	66	69.7	10	Snd Lvl	65.2	4.5	5	-0.5
Receiver3 (second row)	3	1	0.0	65.0	66	65.0	10	----	62.2	2.8	5	-2.2
Serenity Christian Church	4	8	0.0	73.4	66	73.4	10	Snd Lvl	65.5	7.9	5	2.9
Receiver5	5	1	0.0	73.0	66	73.0	10	Snd Lvl	64.9	8.1	5	3.1
Receiver6	6	1	0.0	73.7	66	73.7	10	Snd Lvl	65.6	8.1	5	3.1
Receiver8	8	1	0.0	72.5	66	72.5	10	Snd Lvl	68.0	4.5	5	-0.5
Landmark Community Church	10	29	0.0	71.8	66	71.8	10	Snd Lvl	71.8	0.0	5	-5.0
Receiver12	12	1	0.0	66.7	66	66.7	10	Snd Lvl	64.4	2.3	5	-2.7
Receiver13	13	1	0.0	69.1	66	69.1	10	Snd Lvl	67.5	1.6	5	-3.4
Receiver14	14	1	0.0	68.7	66	68.7	10	Snd Lvl	66.7	2.0	5	-3.0
Receiver19	19	1	0.0	68.4	66	68.4	10	Snd Lvl	63.1	5.3	5	0.3
Receiver22	22	1	0.0	70.8	66	70.8	10	Snd Lvl	64.6	6.2	5	1.2
Receiver46	46	1	0.0	64.8	66	64.8	10	----	63.0	1.8	5	-3.2
Receiver47	47	1	0.0	64.2	66	64.2	10	----	62.5	1.7	5	-3.3
Receiver48	48	1	0.0	62.6	66	62.6	10	----	61.0	1.6	5	-3.4
Receiver56	56	1	0.0	64.5	66	64.5	10	----	62.4	2.1	5	-2.9
Receiver57	57	1	0.0	65.8	66	65.8	10	----	64.1	1.7	5	-3.3
Receiver58	58	1	0.0	69.0	66	69.0	10	Snd Lvl	62.6	6.4	5	1.4
Receiver63	63	1	0.0	72.7	66	72.7	10	Snd Lvl	66.4	6.3	5	1.3
Receiver64	64	1	0.0	62.4	66	62.4	10	----	57.7	4.7	5	-0.3
Receiver65	65	1	0.0	68.6	66	68.6	10	Snd Lvl	62.7	5.9	5	0.9
Receiver66	66	1	0.0	62.2	66	62.2	10	----	58.8	3.4	5	-1.6

Receiver68	68	1	0.0	63.7	66	63.7	10	----	58.2	5.5	5	0.5
Receiver70	70	1	0.0	65.8	66	65.8	10	----	60.0	5.8	5	0.8
Receiver71	71	1	0.0	68.7	66	68.7	10	Snd Lvl	63.4	5.3	5	0.3
Receiver79	79	1	0.0	57.1	66	57.1	10	----	52.5	4.6	5	-0.4
Receiver80	80	1	0.0	60.0	66	60.0	10	----	54.6	5.4	5	0.4
Receiver82	82	1	0.0	62.9	66	62.9	10	----	57.1	5.8	5	0.8
Receiver83	83	1	0.0	62.1	66	62.1	10	----	56.0	6.1	5	1.1
Receiver84	84	1	0.0	64.9	66	64.9	10	----	58.6	6.3	5	1.3
Receiver85	85	1	0.0	63.2	66	63.2	10	----	57.8	5.4	5	0.4
Receiver92	92	1	0.0	66.3	66	66.3	10	Snd Lvl	59.8	6.5	5	1.5
Receiver93	93	1	0.0	64.8	66	64.8	10	----	59.6	5.2	5	0.2
Roosevelt Elementary	95	7	0.0	68.4	66	68.4	10	Snd Lvl	61.9	6.5	5	1.5

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	76	0.0	4.5	8.1
All Impacted	59	0.0	4.9	8.1
All that meet NR Goal	32	5.2	6.2	8.1

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 3
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver4	4	1	0.0	68.9	66	68.9	10	Snd Lvl	68.1	0.8	5	-4.2
Receiver5	5	1	0.0	65.0	66	65.0	10	----	63.4	1.6	5	-3.4
Receiver6	6	1	0.0	62.3	66	62.3	10	----	60.9	1.4	5	-3.6
Receiver7	7	1	0.0	61.6	66	61.6	10	----	60.6	1.0	5	-4.0
Receiver12	12	1	0.0	74.6	66	74.6	10	Snd Lvl	74.5	0.1	5	-4.9
Receiver13	13	1	0.0	69.4	66	69.4	10	Snd Lvl	68.6	0.8	5	-4.2
Receiver14	14	1	0.0	66.4	66	66.4	10	Snd Lvl	65.7	0.7	5	-4.3
Receiver15	15	1	0.0	63.7	66	63.7	10	----	62.3	1.4	5	-3.6
Receiver16	16	1	0.0	62.8	66	62.8	10	----	61.4	1.4	5	-3.6
Receiver17	17	1	0.0	63.3	66	63.3	10	----	61.7	1.6	5	-3.4
Receiver22	22	1	0.0	71.3	66	71.3	10	Snd Lvl	71.2	0.1	5	-4.9
Receiver23	23	1	0.0	68.3	66	68.3	10	Snd Lvl	68.2	0.1	5	-4.9
Receiver24	24	1	0.0	60.1	66	60.1	10	----	59.4	0.7	5	-4.3
Receiver25	25	1	0.0	61.5	66	61.5	10	----	60.9	0.6	5	-4.4
Receiver26	26	1	0.0	62.0	66	62.0	10	----	60.9	1.1	5	-3.9
Receiver27	27	1	0.0	62.6	66	62.6	10	----	61.5	1.1	5	-3.9
Receiver32	32	1	0.0	73.2	66	73.2	10	Snd Lvl	73.1	0.1	5	-4.9
Receiver33	33	1	0.0	67.6	66	67.6	10	Snd Lvl	67.5	0.1	5	-4.9
Receiver34	34	1	0.0	62.6	66	62.6	10	----	62.4	0.2	5	-4.8
Receiver35	35	1	0.0	60.7	66	60.7	10	----	60.2	0.5	5	-4.5
Receiver36	36	1	0.0	62.5	66	62.5	10	----	61.4	1.1	5	-3.9
Receiver37	37	1	0.0	62.4	66	62.4	10	----	61.4	1.0	5	-4.0
Receiver38	38	1	0.0	62.1	66	62.1	10	----	61.1	1.0	5	-4.0

Receiver44	44	1	0.0	67.4	66	67.4	10	Snd Lvl	65.4	2.0	5	-3.0
Receiver45	45	1	0.0	64.5	66	64.5	10	----	61.0	3.5	5	-1.5
Receiver46	46	1	0.0	62.9	66	62.9	10	----	60.0	2.9	5	-2.1
Receiver47	47	1	0.0	61.7	66	61.7	10	----	59.2	2.5	5	-2.5
Receiver48	48	1	0.0	61.9	66	61.9	10	----	60.0	1.9	5	-3.1
Receiver49	49	1	0.0	62.2	66	62.2	10	----	60.8	1.4	5	-3.6
Receiver50	50	1	0.0	62.5	66	62.5	10	----	61.3	1.2	5	-3.8
Receiver51	51	1	0.0	62.4	66	62.4	10	----	61.3	1.1	5	-3.9
Receiver52	52	1	0.0	72.9	66	72.9	10	Snd Lvl	71.2	1.7	5	-3.3
Receiver53	53	1	0.0	64.8	66	64.8	10	----	63.1	1.7	5	-3.3
Receiver54	54	1	0.0	63.1	66	63.1	10	----	61.4	1.7	5	-3.3
Receiver55	55	1	0.0	62.9	66	62.9	10	----	61.0	1.9	5	-3.1
Receiver56	56	1	0.0	62.5	66	62.5	10	----	60.5	2.0	5	-3.0
Receiver57	57	1	0.0	62.3	66	62.3	10	----	60.5	1.8	5	-3.2
Receiver58	58	1	0.0	62.1	66	62.1	10	----	60.3	1.8	5	-3.2
Receiver59	59	1	0.0	62.0	66	62.0	10	----	60.4	1.6	5	-3.4
Receiver60	60	1	0.0	71.5	66	71.5	10	Snd Lvl	67.3	4.2	5	-0.8
Receiver61	61	1	0.0	65.5	66	65.5	10	----	62.2	3.3	5	-1.7
Receiver62	62	1	0.0	57.8	66	57.8	10	----	56.4	1.4	5	-3.6
Receiver63	63	1	0.0	59.6	66	59.6	10	----	58.8	0.8	5	-4.2
Receiver64	64	1	0.0	61.4	66	61.4	10	----	59.4	2.0	5	-3.0
Receiver65	65	1	0.0	61.6	66	61.6	10	----	59.5	2.1	5	-2.9
Receiver66	66	1	0.0	61.5	66	61.5	10	----	59.4	2.1	5	-2.9
Receiver67	67	1	0.0	61.4	66	61.4	10	----	59.4	2.0	5	-3.0
Receiver69	69	1	0.0	71.3	66	71.3	10	Snd Lvl	68.3	3.0	5	-2.0
Receiver70	70	1	0.0	56.7	66	56.7	10	----	55.1	1.6	5	-3.4
Receiver71	71	1	0.0	58.5	66	58.5	10	----	57.4	1.1	5	-3.9
Receiver72	72	1	0.0	58.3	66	58.3	10	----	57.5	0.8	5	-4.2
Receiver73	73	1	0.0	59.1	66	59.1	10	----	58.5	0.6	5	-4.4
Receiver74	74	1	0.0	59.9	66	59.9	10	----	58.8	1.1	5	-3.9
Receiver75	75	1	0.0	60.3	66	60.3	10	----	58.9	1.4	5	-3.6
Receiver76	76	1	0.0	60.4	66	60.4	10	----	58.8	1.6	5	-3.4
Receiver78	78	1	0.0	68.6	66	68.6	10	Snd Lvl	67.1	1.5	5	-3.5
Receiver79	79	1	0.0	56.7	66	56.7	10	----	55.7	1.0	5	-4.0
Receiver80	80	1	0.0	56.9	66	56.9	10	----	56.3	0.6	5	-4.4
Receiver81	81	1	0.0	58.3	66	58.3	10	----	57.3	1.0	5	-4.0
Receiver82	82	1	0.0	59.5	66	59.5	10	----	58.1	1.4	5	-3.6
Receiver83	83	1	0.0	59.5	66	59.5	10	----	58.5	1.0	5	-4.0
Receiver88	88	1	0.0	67.9	66	67.9	10	Snd Lvl	65.4	2.5	5	-2.5
Receiver89	89	1	0.0	61.4	66	61.4	10	----	58.7	2.7	5	-2.3
Receiver90	90	1	0.0	61.8	66	61.8	10	----	59.7	2.1	5	-2.9

Receiver91	91	1	0.0	60.3	66	60.3	10	----	58.9	1.4	5	-3.6
Receiver92	92	1	0.0	59.8	66	59.8	10	----	58.8	1.0	5	-4.0
Receiver93	93	1	0.0	60.2	66	60.2	10	----	59.1	1.1	5	-3.9
Receiver94	94	1	0.0	60.3	66	60.3	10	----	59.1	1.2	5	-3.8
Receiver99	99	1	0.0	67.8	66	67.8	10	Snd Lvl	66.0	1.8	5	-3.2
Receiver100	100	1	0.0	63.2	66	63.2	10	----	62.0	1.2	5	-3.8
Receiver104	104	1	0.0	72.6	66	72.6	10	Snd Lvl	71.2	1.4	5	-3.6
Receiver105	105	1	0.0	72.4	66	72.4	10	Snd Lvl	71.1	1.3	5	-3.7
Receiver106	106	1	0.0	71.9	66	71.9	10	Snd Lvl	71.1	0.8	5	-4.2
Receiver107	107	1	0.0	71.3	66	71.3	10	Snd Lvl	70.5	0.8	5	-4.2
Receiver108	108	1	0.0	70.6	66	70.6	10	Snd Lvl	69.9	0.7	5	-4.3
Receiver109	109	1	0.0	70.1	66	70.1	10	Snd Lvl	69.5	0.6	5	-4.4
Receiver110	110	1	0.0	69.2	66	69.2	10	Snd Lvl	68.7	0.5	5	-4.5
Receiver111	111	1	0.0	68.7	66	68.7	10	Snd Lvl	68.1	0.6	5	-4.4
Receiver112	112	1	0.0	67.6	66	67.6	10	Snd Lvl	67.0	0.6	5	-4.4
Receiver114	114	1	0.0	63.5	66	63.5	10	----	61.7	1.8	5	-3.2
Receiver115	115	1	0.0	63.2	66	63.2	10	----	61.4	1.8	5	-3.2
Receiver116	116	1	0.0	62.8	66	62.8	10	----	61.5	1.3	5	-3.7
Receiver117	117	1	0.0	61.2	66	61.2	10	----	60.0	1.2	5	-3.8
Receiver118	118	1	0.0	60.1	66	60.1	10	----	58.7	1.4	5	-3.6
Receiver119	119	1	0.0	58.7	66	58.7	10	----	58.1	0.6	5	-4.4
Receiver120	120	1	0.0	58.9	66	58.9	10	----	58.5	0.4	5	-4.6
Receiver121	121	1	0.0	59.0	66	59.0	10	----	58.4	0.6	5	-4.4
Receiver122	122	1	0.0	59.1	66	59.1	10	----	58.3	0.8	5	-4.2
Receiver123	123	1	0.0	59.3	66	59.3	10	----	58.4	0.9	5	-4.1
Receiver124	124	1	0.0	59.7	66	59.7	10	----	58.6	1.1	5	-3.9
Receiver125	125	1	0.0	75.6	66	75.6	10	Snd Lvl	74.1	1.5	5	-3.5
Receiver126	126	1	0.0	74.6	66	74.6	10	Snd Lvl	73.0	1.6	5	-3.4
Receiver127	127	1	0.0	74.3	66	74.3	10	Snd Lvl	72.2	2.1	5	-2.9
Receiver128	128	1	0.0	73.9	66	73.9	10	Snd Lvl	71.2	2.7	5	-2.3
Receiver129	129	1	0.0	73.5	66	73.5	10	Snd Lvl	70.0	3.5	5	-1.5
Receiver131	131	1	0.0	65.9	66	65.9	10	----	65.2	0.7	5	-4.3
Receiver132	132	1	0.0	65.0	66	65.0	10	----	64.2	0.8	5	-4.2
Receiver133	133	1	0.0	64.0	66	64.0	10	----	63.0	1.0	5	-4.0
Receiver134	134	1	0.0	64.1	66	64.1	10	----	62.7	1.4	5	-3.6
Receiver135	135	1	0.0	65.5	66	65.5	10	----	62.7	2.8	5	-2.2
Receiver136	136	1	0.0	66.5	66	66.5	10	Snd Lvl	65.8	0.7	5	-4.3
Receiver138	138	1	0.0	70.3	66	70.3	10	Snd Lvl	66.9	3.4	5	-1.6
Receiver139	139	1	0.0	68.1	66	68.1	10	Snd Lvl	63.9	4.2	5	-0.8
Receiver140	140	1	0.0	68.5	66	68.5	10	Snd Lvl	63.5	5.0	5	0.0
Receiver141	141	1	0.0	73.1	66	73.1	10	Snd Lvl	67.0	6.1	5	1.1

Receiver142	142	1	0.0	72.4	66	72.4	10	Snd Lvl	66.1	6.3	5	1.3
Receiver143	143	1	0.0	64.8	66	64.8	10	----	60.1	4.7	5	-0.3
Receiver144	144	1	0.0	65.9	66	65.9	10	----	61.0	4.9	5	-0.1
Receiver145	145	1	0.0	66.8	66	66.8	10	Snd Lvl	61.7	5.1	5	0.1
Receiver146	146	1	0.0	66.0	66	66.0	10	Snd Lvl	61.2	4.8	5	-0.2
Receiver147	147	1	0.0	67.5	66	67.5	10	Snd Lvl	62.3	5.2	5	0.2
Receiver150	150	1	0.0	62.6	66	62.6	10	----	61.4	1.2	5	-3.8
Receiver151	151	1	0.0	61.6	66	61.6	10	----	60.0	1.6	5	-3.4
Receiver152	152	1	0.0	61.4	66	61.4	10	----	59.4	2.0	5	-3.0
Receiver153	153	1	0.0	63.0	66	63.0	10	----	59.6	3.4	5	-1.6
Receiver154	154	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver155	155	1	0.0	63.7	66	63.7	10	----	60.1	3.6	5	-1.4
Receiver156	156	1	0.0	64.3	66	64.3	10	----	60.3	4.0	5	-1.0
Receiver157	157	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver158	158	1	0.0	65.1	66	65.1	10	----	60.7	4.4	5	-0.6
Receiver160	160	1	0.0	77.8	66	77.8	10	Snd Lvl	71.6	6.2	5	1.2
Receiver161	161	1	0.0	77.2	66	77.2	10	Snd Lvl	70.8	6.4	5	1.4
Receiver162	162	1	0.0	76.5	66	76.5	10	Snd Lvl	70.0	6.5	5	1.5
Receiver163	163	1	0.0	72.4	66	72.4	10	Snd Lvl	65.4	7.0	5	2.0
Receiver164	164	1	0.0	74.8	66	74.8	10	Snd Lvl	67.5	7.3	5	2.3
Receiver165	165	1	0.0	73.9	66	73.9	10	Snd Lvl	65.7	8.2	5	3.2
Receiver167	167	1	0.0	79.9	51	79.9	10	Snd Lvl	75.3	4.6	5	-0.4
Receiver169	169	1	0.0	78.7	51	78.7	10	Snd Lvl	74.1	4.6	5	-0.4
Receiver170	170	1	0.0	76.7	51	76.7	10	Snd Lvl	71.1	5.6	5	0.6
Receiver171	171	1	0.0	77.4	51	77.4	10	Snd Lvl	71.7	5.7	5	0.7
Receiver172	172	1	0.0	77.9	51	77.9	10	Snd Lvl	72.2	5.7	5	0.7
Receiver173	173	1	0.0	76.3	51	76.3	10	Snd Lvl	70.2	6.1	5	1.1
Receiver176	176	1	0.0	74.7	66	74.7	10	Snd Lvl	62.9	11.8	5	6.8
Receiver177	177	1	0.0	72.2	66	72.2	10	Snd Lvl	62.6	9.6	5	4.6
Receiver178	178	1	0.0	68.4	66	68.4	10	Snd Lvl	62.0	6.4	5	1.4
Receiver179	179	1	0.0	68.9	66	68.9	10	Snd Lvl	62.1	6.8	5	1.8
Receiver180	180	1	0.0	69.9	66	69.9	10	Snd Lvl	62.5	7.4	5	2.4
Receiver181	181	1	0.0	70.8	66	70.8	10	Snd Lvl	63.0	7.8	5	2.8
Receiver182	182	1	0.0	71.6	66	71.6	10	Snd Lvl	63.4	8.2	5	3.2
Receiver183	183	1	0.0	66.4	66	66.4	10	Snd Lvl	61.5	4.9	5	-0.1
Receiver184	184	1	0.0	65.9	66	65.9	10	----	61.1	4.8	5	-0.2
Receiver185	185	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver186	186	1	0.0	64.4	66	64.4	10	----	60.1	4.3	5	-0.7
Receiver187	187	1	0.0	65.0	66	65.0	10	----	60.5	4.5	5	-0.5
Receiver188	188	1	0.0	63.9	66	63.9	10	----	59.9	4.0	5	-1.0
Receiver189	189	1	0.0	64.2	66	64.2	10	----	59.2	5.0	5	0.0

RESULTS: SOUND LEVELS **I-75 Noise**

Receiver190	190	1	0.0	68.7	66	68.7	10	Snd Lvl	60.3	8.4	5	3.4
Receiver191	191	1	0.0	68.1	66	68.1	10	Snd Lvl	59.6	8.5	5	3.5
Receiver192	192	1	0.0	64.3	66	64.3	10	----	59.0	5.3	5	0.3
Receiver193	193	1	0.0	64.7	66	64.7	10	----	58.5	6.2	5	1.2
Receiver194	194	1	0.0	64.9	66	64.9	10	----	58.5	6.4	5	1.4
Receiver195	195	1	0.0	64.1	66	64.1	10	----	58.6	5.5	5	0.5
Receiver196	196	1	0.0	63.4	66	63.4	10	----	58.6	4.8	5	-0.2
Receiver197	197	1	0.0	62.3	66	62.3	10	----	58.7	3.6	5	-1.4
Receiver198	198	1	0.0	61.6	66	61.6	10	----	58.7	2.9	5	-2.1
Receiver199	199	1	0.0	71.6	66	71.6	10	Snd Lvl	62.7	8.9	5	3.9
Receiver200	200	1	0.0	72.4	66	72.4	10	Snd Lvl	63.1	9.3	5	4.3
Receiver201	201	1	0.0	69.3	66	69.3	10	Snd Lvl	62.3	7.0	5	2.0
Receiver202	202	1	0.0	64.2	66	64.2	10	----	59.7	4.5	5	-0.5
Receiver203	203	1	0.0	65.4	66	65.4	10	----	60.4	5.0	5	0.0
Receiver204	204	1	0.0	64.1	66	64.1	10	----	59.9	4.2	5	-0.8
Receiver205	205	1	0.0	64.8	66	64.8	10	----	59.5	5.3	5	0.3
Receiver206	206	1	0.0	61.1	66	61.1	10	----	58.4	2.7	5	-2.3
Receiver207	207	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver208	208	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver209	209	1	0.0	67.1	66	67.1	10	Snd Lvl	61.2	5.9	5	0.9
Receiver210	210	1	0.0	66.6	66	66.6	10	Snd Lvl	60.8	5.8	5	0.8
Receiver211	211	1	0.0	65.8	66	65.8	10	----	60.3	5.5	5	0.5
Receiver212	212	1	0.0	64.3	66	64.3	10	----	59.4	4.9	5	-0.1
Receiver213	213	1	0.0	63.3	66	63.3	10	----	58.8	4.5	5	-0.5
Receiver214	214	1	0.0	62.5	66	62.5	10	----	58.4	4.1	5	-0.9
Receiver215	215	1	0.0	61.9	66	61.9	10	----	57.9	4.0	5	-1.0
Receiver216	216	1	0.0	61.1	66	61.1	10	----	57.6	3.5	5	-1.5
Receiver217	217	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver218	218	1	0.0	60.6	66	60.6	10	----	58.7	1.9	5	-3.1
Receiver219	219	1	0.0	61.0	66	61.0	10	----	59.5	1.5	5	-3.5
Receiver220	220	1	0.0	60.7	66	60.7	10	----	59.0	1.7	5	-3.3
Receiver222	222	1	0.0	69.2	66	69.2	10	Snd Lvl	67.3	1.9	5	-3.1
Receiver223	223	1	0.0	65.4	66	65.4	10	----	63.2	2.2	5	-2.8
Receiver225	225	1	0.0	65.4	66	65.4	10	----	64.1	1.3	5	-3.7
Receiver226	226	1	0.0	66.4	66	66.4	10	Snd Lvl	64.9	1.5	5	-3.5
Receiver227	227	1	0.0	67.4	66	67.4	10	Snd Lvl	65.9	1.5	5	-3.5
Receiver228	228	1	0.0	65.2	66	65.2	10	----	63.7	1.5	5	-3.5
Receiver229	229	1	0.0	65.6	66	65.6	10	----	64.1	1.5	5	-3.5
Receiver230	230	1	0.0	66.4	66	66.4	10	Snd Lvl	65.0	1.4	5	-3.6
Receiver231	231	1	0.0	64.7	66	64.7	10	----	63.2	1.5	5	-3.5
Receiver232	232	1	0.0	65.1	66	65.1	10	----	63.7	1.4	5	-3.6

Receiver233	233	1	0.0	65.7	66	65.7	10	----	64.3	1.4	5	-3.6
Receiver235	235	1	0.0	68.8	71	68.8	10	----	68.8	0.0	5	-5.0
Receiver237	237	1	0.0	0.0	71	0.0	10	invalid	0.0	0.0	5	0.0
Receiver239	239	1	0.0	63.6	71	63.6	10	----	63.6	0.0	5	-5.0
Receiver242	242	1	0.0	77.0	51	77.0	10	Snd Lvl	71.4	5.6	5	0.6
Receiver244	244	1	0.0	64.3	66	64.3	10	----	62.4	1.9	5	-3.1

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	193	0.0	2.8	11.8
All Impacted	70	0.1	4.0	11.8
All that meet NR Goal	37	5.0	6.7	11.8

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg5a - 11 mile to Gardenia - Walls
BARRIER DESIGN: INPUT HEIGHTS

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	72.2	71	72.2	10	Snd Lvl	72.1	0.1	5	-4.9
Receiver3	3	1	0.0	68.8	71	68.8	10	----	68.8	0.0	5	-5.0
Receiver4	4	1	0.0	67.3	71	67.3	10	----	67.3	0.0	5	-5.0
Receiver5	5	1	0.0	64.8	71	64.8	10	----	64.8	0.0	5	-5.0
Receiver6	6	1	0.0	63.9	71	63.9	10	----	63.9	0.0	5	-5.0
Receiver7	7	1	0.0	62.5	71	62.5	10	----	62.5	0.0	5	-5.0
Receiver8	8	1	0.0	68.9	66	68.9	10	Snd Lvl	65.9	3.0	5	-2.0
Receiver9	9	1	0.0	66.0	66	66.0	10	Snd Lvl	64.2	1.8	5	-3.2
Receiver10	10	1	0.0	64.8	66	64.8	10	----	62.8	2.0	5	-3.0
Receiver11	11	1	0.0	63.4	66	63.4	10	----	61.2	2.2	5	-2.8
Receiver12	12	1	0.0	71.8	66	71.8	10	Snd Lvl	69.8	2.0	5	-3.0
Receiver13	13	1	0.0	67.7	66	67.7	10	Snd Lvl	65.0	2.7	5	-2.3
Receiver14	14	1	0.0	66.4	66	66.4	10	Snd Lvl	63.6	2.8	5	-2.2
Receiver15	15	1	0.0	64.9	66	64.9	10	----	62.4	2.5	5	-2.5
Receiver16	16	1	0.0	64.1	66	64.1	10	----	61.3	2.8	5	-2.2
Receiver17	17	1	0.0	72.7	66	72.7	10	Snd Lvl	68.3	4.4	5	-0.6
Receiver18	18	1	0.0	64.2	66	64.2	10	----	60.9	3.3	5	-1.7
Receiver19	19	1	0.0	64.9	66	64.9	10	----	61.5	3.4	5	-1.6
Receiver20	20	1	0.0	65.8	66	65.8	10	----	62.4	3.4	5	-1.6
Receiver21	21	1	0.0	67.0	66	67.0	10	Snd Lvl	63.3	3.7	5	-1.3
Receiver22	22	1	0.0	68.3	66	68.3	10	Snd Lvl	64.4	3.9	5	-1.1
Receiver23	23	1	0.0	69.1	66	69.1	10	Snd Lvl	65.1	4.0	5	-1.0
Receiver24	24	1	0.0	70.3	66	70.3	10	Snd Lvl	65.8	4.5	5	-0.5

Receiver25	25	1	0.0	72.9	66	72.9	10	Snd Lvl	69.2	3.7	5	-1.3
Receiver26	26	1	0.0	70.2	66	70.2	10	Snd Lvl	66.3	3.9	5	-1.1
Receiver27	27	1	0.0	68.5	66	68.5	10	Snd Lvl	64.6	3.9	5	-1.1
Receiver28	28	1	0.0	67.3	66	67.3	10	Snd Lvl	63.7	3.6	5	-1.4
Receiver29	29	1	0.0	66.3	66	66.3	10	Snd Lvl	62.8	3.5	5	-1.5
Receiver30	30	1	0.0	65.7	66	65.7	10	----	62.1	3.6	5	-1.4
Receiver31	31	1	0.0	64.9	66	64.9	10	----	61.2	3.7	5	-1.3
Receiver32	32	1	0.0	64.4	66	64.4	10	----	60.6	3.8	5	-1.2
Receiver33	33	1	0.0	76.7	66	76.7	10	Snd Lvl	71.1	5.6	5	0.6
Receiver34	34	1	0.0	73.1	66	73.1	10	Snd Lvl	66.2	6.9	5	1.9
Receiver35	35	1	0.0	70.6	66	70.6	10	Snd Lvl	64.2	6.4	5	1.4
Receiver36	36	1	0.0	68.9	66	68.9	10	Snd Lvl	63.2	5.7	5	0.7
Receiver37	37	1	0.0	67.9	66	67.9	10	Snd Lvl	62.8	5.1	5	0.1
Receiver38	38	1	0.0	67.3	66	67.3	10	Snd Lvl	62.4	4.9	5	-0.1
Receiver39	39	1	0.0	66.6	66	66.6	10	Snd Lvl	61.9	4.7	5	-0.3
Receiver40	40	1	0.0	65.7	66	65.7	10	----	61.2	4.5	5	-0.5
Receiver42	42	1	0.0	75.1	66	75.1	10	Snd Lvl	69.5	5.6	5	0.6
Receiver43	43	1	0.0	72.1	66	72.1	10	Snd Lvl	65.9	6.2	5	1.2
Receiver44	44	1	0.0	70.3	66	70.3	10	Snd Lvl	64.3	6.0	5	1.0
Receiver45	45	1	0.0	69.3	66	69.3	10	Snd Lvl	63.5	5.8	5	0.8
Receiver46	46	1	0.0	68.8	66	68.8	10	Snd Lvl	63.0	5.8	5	0.8
Receiver47	47	1	0.0	67.8	66	67.8	10	Snd Lvl	62.3	5.5	5	0.5
Receiver48	48	1	0.0	67.2	66	67.2	10	Snd Lvl	62.2	5.0	5	0.0
Receiver49	49	1	0.0	66.5	66	66.5	10	Snd Lvl	62.2	4.3	5	-0.7
Receiver50	50	1	0.0	75.8	66	75.8	10	Snd Lvl	72.2	3.6	5	-1.4
Receiver51	51	1	0.0	71.1	66	71.1	10	Snd Lvl	67.7	3.4	5	-1.6
Receiver52	52	1	0.0	70.5	66	70.5	10	Snd Lvl	66.5	4.0	5	-1.0
Receiver53	53	1	0.0	69.5	66	69.5	10	Snd Lvl	65.7	3.8	5	-1.2
Receiver54	54	1	0.0	68.8	66	68.8	10	Snd Lvl	65.0	3.8	5	-1.2
Receiver55	55	1	0.0	68.1	66	68.1	10	Snd Lvl	64.4	3.7	5	-1.3
Receiver56	56	1	0.0	67.3	66	67.3	10	Snd Lvl	63.6	3.7	5	-1.3
Receiver57	57	1	0.0	77.1	66	77.1	10	Snd Lvl	73.7	3.4	5	-1.6
Receiver58	58	1	0.0	73.7	66	73.7	10	Snd Lvl	67.6	6.1	5	1.1
Receiver59	59	1	0.0	71.7	66	71.7	10	Snd Lvl	66.7	5.0	5	0.0
Receiver60	60	1	0.0	70.6	66	70.6	10	Snd Lvl	67.1	3.5	5	-1.5
Receiver61	61	1	0.0	69.7	66	69.7	10	Snd Lvl	66.4	3.3	5	-1.7
Receiver62	62	1	0.0	69.0	66	69.0	10	Snd Lvl	65.9	3.1	5	-1.9
Receiver63	63	1	0.0	68.4	66	68.4	10	Snd Lvl	65.2	3.2	5	-1.8
Receiver64	64	1	0.0	67.8	66	67.8	10	Snd Lvl	64.5	3.3	5	-1.7
Receiver65	65	1	0.0	67.2	66	67.2	10	Snd Lvl	63.8	3.4	5	-1.6
Receiver66	66	1	0.0	77.1	66	77.1	10	Snd Lvl	76.1	1.0	5	-4.0

Receiver67	67	1	0.0	74.2	66	74.2	10	Snd Lvl	72.7	1.5	5	-3.5
Receiver68	68	1	0.0	72.1	66	72.1	10	Snd Lvl	70.5	1.6	5	-3.4
Receiver69	69	1	0.0	71.0	66	71.0	10	Snd Lvl	69.6	1.4	5	-3.6
Receiver70	70	1	0.0	69.8	66	69.8	10	Snd Lvl	68.4	1.4	5	-3.6
Receiver71	71	1	0.0	68.9	66	68.9	10	Snd Lvl	67.5	1.4	5	-3.6
Receiver72	72	1	0.0	68.2	66	68.2	10	Snd Lvl	66.7	1.5	5	-3.5
Receiver73	73	1	0.0	67.3	66	67.3	10	Snd Lvl	65.8	1.5	5	-3.5
Receiver74	74	1	0.0	66.5	66	66.5	10	Snd Lvl	65.0	1.5	5	-3.5
Receiver159	159	4	0.0	72.8	66	72.8	10	Snd Lvl	71.7	1.1	5	-3.9
Receiver160	160	4	0.0	79.3	66	79.3	10	Snd Lvl	74.7	4.6	5	-0.4
Receiver161	161	4	0.0	78.0	66	78.0	10	Snd Lvl	71.8	6.2	5	1.2
Receiver162	162	4	0.0	72.8	66	72.8	10	Snd Lvl	65.6	7.2	5	2.2
Receiver163	163	4	0.0	49.0	66	49.0	10	----	49.3	-0.3	5	-5.3
Receiver164	164	4	0.0	47.8	66	47.8	10	----	48.2	-0.4	5	-5.4
Receiver165	165	4	0.0	49.7	66	49.7	10	----	49.8	-0.1	5	-5.1
Receiver166	166	4	0.0	50.1	66	50.1	10	----	50.2	-0.1	5	-5.1
Receiver167	167	4	0.0	72.9	66	72.9	10	Snd Lvl	65.5	7.4	5	2.4
Receiver168	168	4	0.0	77.6	66	77.6	10	Snd Lvl	70.7	6.9	5	1.9
Receiver169	169	4	0.0	78.9	66	78.9	10	Snd Lvl	73.5	5.4	5	0.4
Receiver170	170	4	0.0	69.3	66	69.3	10	Snd Lvl	63.8	5.5	5	0.5
Receiver171	171	4	0.0	49.8	66	49.8	10	----	50.2	-0.4	5	-5.4
Receiver172	172	4	0.0	49.1	66	49.1	10	----	49.3	-0.2	5	-5.2
Receiver173	173	4	0.0	47.9	66	47.9	10	----	48.3	-0.4	5	-5.4
Receiver174	174	4	0.0	49.1	66	49.1	10	----	49.0	0.1	5	-4.9
Receiver191	191	4	0.0	63.0	66	63.0	10	----	62.2	0.8	5	-4.2
Receiver192	192	4	0.0	62.9	66	62.9	10	----	61.7	1.2	5	-3.8
Receiver193	193	4	0.0	61.9	66	61.9	10	----	57.8	4.1	5	-0.9
Receiver194	194	4	0.0	62.2	66	62.2	10	----	57.0	5.2	5	0.2
Receiver195	195	4	0.0	63.5	66	63.5	10	----	57.5	6.0	5	1.0
Receiver196	196	4	0.0	62.8	66	62.8	10	----	57.2	5.6	5	0.6
Receiver197	197	4	0.0	61.6	66	61.6	10	----	56.6	5.0	5	0.0
Receiver198	198	4	0.0	61.5	66	61.5	10	----	56.7	4.8	5	-0.2
Receiver200	200	1	0.0	62.8	66	62.8	10	----	61.3	1.5	5	-3.5
Receiver201	201	1	0.0	71.7	66	71.7	10	Snd Lvl	68.4	3.3	5	-1.7
Receiver202	202	1	0.0	69.5	66	69.5	10	Snd Lvl	65.0	4.5	5	-0.5
Receiver203	203	1	0.0	67.6	66	67.6	10	Snd Lvl	64.0	3.6	5	-1.4
Receiver204	204	1	0.0	65.3	66	65.3	10	----	62.3	3.0	5	-2.0
Receiver205	205	1	0.0	68.6	66	68.6	10	Snd Lvl	65.6	3.0	5	-2.0
Receiver206	206	1	0.0	66.3	66	66.3	10	Snd Lvl	64.1	2.2	5	-2.8
Receiver207	207	1	0.0	65.8	66	65.8	10	----	63.4	2.4	5	-2.6
Receiver208	208	1	0.0	69.3	66	69.3	10	Snd Lvl	68.2	1.1	5	-3.9

Receiver209	209	1	0.0	68.9	66	68.9	10	Snd Lvl	67.5	1.4	5	-3.6
Receiver74	74	1	0.0	65.9	66	65.9	10	----	60.2	5.7	5	0.7
Receiver210	210	1	0.0	66.5	66	66.5	10	Snd Lvl	60.8	5.7	5	0.7
Receiver211	211	1	0.0	64.8	66	64.8	10	----	59.7	5.1	5	0.1
Receiver212	212	1	0.0	64.0	66	64.0	10	----	59.2	4.8	5	-0.2
Receiver213	213	1	0.0	65.3	66	65.3	10	----	59.9	5.4	5	0.4
Receiver214	214	1	0.0	63.2	66	63.2	10	----	58.8	4.4	5	-0.6
Receiver215	215	1	0.0	60.7	66	60.7	10	----	56.8	3.9	5	-1.1
Receiver216	216	1	0.0	58.0	66	58.0	10	----	55.3	2.7	5	-2.3
Receiver217	217	1	0.0	56.4	66	56.4	10	----	54.7	1.7	5	-3.3
Receiver218	218	1	0.0	57.2	66	57.2	10	----	55.3	1.9	5	-3.1
Receiver219	219	1	0.0	57.2	66	57.2	10	----	55.8	1.4	5	-3.6
Receiver220	220	1	0.0	58.1	66	58.1	10	----	57.4	0.7	5	-4.3
Receiver221	221	1	0.0	59.8	66	59.8	10	----	59.6	0.2	5	-4.8
Receiver222	222	1	0.0	61.2	66	61.2	10	----	60.8	0.4	5	-4.6
Receiver223	223	4	0.0	72.1	66	72.1	10	Snd Lvl	72.0	0.1	5	-4.9
Receiver225	225	4	0.0	72.1	66	72.1	10	Snd Lvl	72.1	0.0	5	-5.0
Receiver226	226	4	0.0	71.8	66	71.8	10	Snd Lvl	71.7	0.1	5	-4.9
Receiver227	227	4	0.0	71.7	66	71.7	10	Snd Lvl	71.7	0.0	5	-5.0
Receiver228	228	4	0.0	72.4	66	72.4	10	Snd Lvl	72.3	0.1	5	-4.9
Receiver229	229	4	0.0	72.4	66	72.4	10	Snd Lvl	72.3	0.1	5	-4.9
Receiver230	230	4	0.0	71.9	66	71.9	10	Snd Lvl	71.8	0.1	5	-4.9
Receiver231	231	4	0.0	72.5	66	72.5	10	Snd Lvl	72.4	0.1	5	-4.9
Receiver232	232	4	0.0	73.9	66	73.9	10	Snd Lvl	73.8	0.1	5	-4.9
Receiver233	233	4	0.0	73.8	66	73.8	10	Snd Lvl	73.7	0.1	5	-4.9
Receiver235	235	4	0.0	73.3	66	73.3	10	Snd Lvl	73.2	0.1	5	-4.9
Receiver237	237	4	0.0	75.3	66	75.3	10	Snd Lvl	75.3	0.0	5	-5.0
Receiver238	238	4	0.0	75.7	66	75.7	10	Snd Lvl	75.7	0.0	5	-5.0
Receiver239	239	4	0.0	77.0	66	77.0	10	Snd Lvl	77.0	0.0	5	-5.0
Receiver240	240	4	0.0	72.3	66	72.3	10	Snd Lvl	72.2	0.1	5	-4.9
Receiver241	241	4	0.0	72.4	66	72.4	10	Snd Lvl	72.3	0.1	5	-4.9
Receiver242	242	4	0.0	77.7	66	77.7	10	Snd Lvl	77.7	0.0	5	-5.0
Receiver243	243	4	0.0	76.0	66	76.0	10	Snd Lvl	75.9	0.1	5	-4.9
Receiver244	244	4	0.0	76.1	66	76.1	10	Snd Lvl	76.1	0.0	5	-5.0
Receiver245	245	4	0.0	75.4	66	75.4	10	Snd Lvl	75.4	0.0	5	-5.0
Receiver246	246	4	0.0	76.0	66	76.0	10	Snd Lvl	76.0	0.0	5	-5.0
Receiver247	247	1	0.0	77.4	66	77.4	10	Snd Lvl	77.4	0.0	5	-5.0
Receiver248	248	1	0.0	77.6	66	77.6	10	Snd Lvl	77.6	0.0	5	-5.0
Receiver249	249	1	0.0	77.5	66	77.5	10	Snd Lvl	77.5	0.0	5	-5.0
Receiver250	250	1	0.0	77.5	66	77.5	10	Snd Lvl	77.5	0.0	5	-5.0
Receiver251	251	1	0.0	77.7	66	77.7	10	Snd Lvl	77.7	0.0	5	-5.0

Receiver252	252	1	0.0	77.9	66	77.9	10	Snd Lvl	77.9	0.0	5	-5.0
Receiver253	253	1	0.0	78.2	66	78.2	10	Snd Lvl	78.1	0.1	5	-4.9
Receiver254	254	1	0.0	78.0	66	78.0	10	Snd Lvl	78.0	0.0	5	-5.0
Receiver255	255	1	0.0	78.2	66	78.2	10	Snd Lvl	78.1	0.1	5	-4.9
Receiver256	256	1	0.0	78.2	66	78.2	10	Snd Lvl	78.0	0.2	5	-4.8
Receiver257	257	1	0.0	78.1	66	78.1	10	Snd Lvl	77.8	0.3	5	-4.7
Receiver258	258	1	0.0	78.1	66	78.1	10	Snd Lvl	77.7	0.4	5	-4.6
Receiver259	259	1	0.0	77.7	66	77.7	10	Snd Lvl	76.0	1.7	5	-3.3
Receiver260	260	1	0.0	78.0	66	78.0	10	Snd Lvl	75.7	2.3	5	-2.7
Receiver261	261	1	0.0	77.7	66	77.7	10	Snd Lvl	74.3	3.4	5	-1.6
Receiver262	262	1	0.0	77.6	66	77.6	10	Snd Lvl	73.3	4.3	5	-0.7
Receiver263	263	1	0.0	77.2	66	77.2	10	Snd Lvl	72.4	4.8	5	-0.2
Receiver264	264	1	0.0	76.7	66	76.7	10	Snd Lvl	70.9	5.8	5	0.8
Receiver265	265	1	0.0	75.9	66	75.9	10	Snd Lvl	70.0	5.9	5	0.9
Receiver266	266	1	0.0	75.1	66	75.1	10	Snd Lvl	69.5	5.6	5	0.6
Receiver267	267	1	0.0	74.3	66	74.3	10	Snd Lvl	69.1	5.2	5	0.2
Receiver268	268	1	0.0	74.1	66	74.1	10	Snd Lvl	69.1	5.0	5	0.0
Receiver269	269	1	0.0	74.1	66	74.1	10	Snd Lvl	69.3	4.8	5	-0.2
Receiver270	270	1	0.0	74.0	66	74.0	10	Snd Lvl	69.5	4.5	5	-0.5
Receiver271	271	1	0.0	73.0	66	73.0	10	Snd Lvl	69.3	3.7	5	-1.3
Receiver272	272	1	0.0	68.3	71	68.3	10	----	67.4	0.9	5	-4.1
Receiver274	274	1	0.0	60.0	66	60.0	10	----	60.0	0.0	5	-5.0
Receiver275	275	1	0.0	64.6	66	64.6	10	----	64.4	0.2	5	-4.8
Receiver276	276	1	0.0	62.0	66	62.0	10	----	62.0	0.0	5	-5.0
Receiver277	277	1	0.0	57.1	66	57.1	10	----	57.0	0.1	5	-4.9
Receiver278	278	1	0.0	50.9	66	50.9	10	----	50.9	0.0	5	-5.0
Receiver279	279	1	0.0	55.8	66	55.8	10	----	55.5	0.3	5	-4.7
Receiver280	280	1	0.0	50.5	66	50.5	10	----	50.5	0.0	5	-5.0
Receiver281	281	1	0.0	50.6	66	50.6	10	----	50.7	-0.1	5	-5.1
Receiver282	282	1	0.0	57.7	66	57.7	10	----	57.7	0.0	5	-5.0
Receiver283	283	1	0.0	52.4	66	52.4	10	----	52.5	-0.1	5	-5.1
Receiver284	284	1	0.0	50.5	66	50.5	10	----	50.5	0.0	5	-5.0
Receiver285	285	1	0.0	54.4	66	54.4	10	----	54.2	0.2	5	-4.8
Receiver286	286	1	0.0	52.5	66	52.5	10	----	52.4	0.1	5	-4.9
Receiver272	272	1	0.0	27.1	71	27.1	10	----	27.1	0.0	5	-5.0
Receiver287	287	1	0.0	59.6	66	59.6	10	----	59.5	0.1	5	-4.9
Receiver288	288	1	0.0	62.6	66	62.6	10	----	62.3	0.3	5	-4.7
Receiver289	289	1	0.0	60.4	66	60.4	10	----	60.2	0.2	5	-4.8
Receiver290	290	1	0.0	58.2	66	58.2	10	----	57.9	0.3	5	-4.7
Receiver291	291	1	0.0	62.5	66	62.5	10	----	62.4	0.1	5	-4.9
Receiver292	292	1	0.0	62.9	66	62.9	10	----	62.8	0.1	5	-4.9

Receiver293	293	1	0.0	56.5	66	56.5	10	----	56.4	0.1	5	-4.9
Receiver294	294	1	0.0	58.1	66	58.1	10	----	58.1	0.0	5	-5.0
Receiver295	295	1	0.0	63.2	66	63.2	10	----	63.1	0.1	5	-4.9
Receiver296	296	1	0.0	63.6	66	63.6	10	----	63.5	0.1	5	-4.9
Receiver297	297	1	0.0	62.2	66	62.2	10	----	62.1	0.1	5	-4.9
Receiver298	298	1	0.0	62.5	66	62.5	10	----	62.3	0.2	5	-4.8
Receiver299	299	1	0.0	62.5	66	62.5	10	----	62.3	0.2	5	-4.8
Receiver300	300	1	0.0	64.6	66	64.6	10	----	64.5	0.1	5	-4.9
Receiver301	301	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	5	-5.0
Receiver302	302	1	0.0	67.1	66	67.1	10	Snd Lvl	66.8	0.3	5	-4.7
Receiver306	306	1	0.0	66.8	66	66.8	10	Snd Lvl	65.2	1.6	5	-3.4
Receiver307	307	1	0.0	66.4	66	66.4	10	Snd Lvl	65.7	0.7	5	-4.3
Receiver308	308	1	0.0	66.6	66	66.6	10	Snd Lvl	66.0	0.6	5	-4.4
Receiver309	309	1	0.0	67.8	66	67.8	10	Snd Lvl	66.8	1.0	5	-4.0
Receiver311	311	1	0.0	65.8	66	65.8	10	----	60.7	5.1	5	0.1
Receiver312	312	1	0.0	66.4	66	66.4	10	Snd Lvl	63.3	3.1	5	-1.9
Receiver313	313	1	0.0	67.2	66	67.2	10	Snd Lvl	66.2	1.0	5	-4.0
Receiver314	314	1	0.0	67.9	66	67.9	10	Snd Lvl	61.4	6.5	5	1.5
Receiver316	316	1	0.0	66.0	66	66.0	10	Snd Lvl	61.8	4.2	5	-0.8
Receiver317	317	1	0.0	66.2	66	66.2	10	Snd Lvl	60.7	5.5	5	0.5
Receiver318	318	1	0.0	65.6	66	65.6	10	----	60.3	5.3	5	0.3
Receiver319	319	1	0.0	64.2	66	64.2	10	----	61.6	2.6	5	-2.4
Receiver321	321	1	0.0	64.0	66	64.0	10	----	61.0	3.0	5	-2.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	345	-0.4	2.3	7.4
All Impacted	216	0.0	2.8	7.4
All that meet NR Goal	66	5.0	5.8	7.4

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg6 - Gardenia to 12 Mile - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	76.5	66	76.5	10	Snd Lvl	76.5	0.0	5	-5.0
Receiver2	2	1	0.0	78.3	66	78.3	10	Snd Lvl	78.3	0.0	5	-5.0
Receiver3	3	1	0.0	68.5	66	68.5	10	Snd Lvl	68.1	0.4	5	-4.6
Receiver4	4	1	0.0	68.8	66	68.8	10	Snd Lvl	68.3	0.5	5	-4.5
Receiver5	5	1	0.0	69.5	66	69.5	10	Snd Lvl	68.9	0.6	5	-4.4
Receiver6	6	1	0.0	72.9	66	72.9	10	Snd Lvl	71.9	1.0	5	-4.0
Receiver7	7	1	0.0	73.4	66	73.4	10	Snd Lvl	69.0	4.4	5	-0.6
Receiver8	8	1	0.0	68.0	66	68.0	10	Snd Lvl	65.0	3.0	5	-2.0
Receiver9	9	1	0.0	68.7	66	68.7	10	Snd Lvl	61.8	6.9	5	1.9
Receiver10	10	1	0.0	62.8	66	62.8	10	----	61.7	1.1	5	-3.9
Receiver11	11	1	0.0	62.0	66	62.0	10	----	59.4	2.6	5	-2.4
Receiver12	12	1	0.0	61.0	66	61.0	10	----	58.4	2.6	5	-2.4
Receiver13	13	1	0.0	62.2	66	62.2	10	----	58.0	4.2	5	-0.8
Receiver14	14	1	0.0	66.1	66	66.1	10	Snd Lvl	56.4	9.7	5	4.7
Receiver15	15	1	0.0	66.1	66	66.1	10	Snd Lvl	55.5	10.6	5	5.6
Receiver16	16	1	0.0	59.6	66	59.6	10	----	58.4	1.2	5	-3.8
Receiver17	17	1	0.0	58.5	66	58.5	10	----	56.7	1.8	5	-3.2
Receiver18	18	1	0.0	58.9	66	58.9	10	----	56.7	2.2	5	-2.8
Receiver19	19	1	0.0	59.8	66	59.8	10	----	57.1	2.7	5	-2.3
Receiver20	20	1	0.0	60.4	66	60.4	10	----	57.3	3.1	5	-1.9
Receiver21	21	1	0.0	58.0	66	58.0	10	----	55.3	2.7	5	-2.3
Receiver22	22	1	0.0	64.9	66	64.9	10	----	58.0	6.9	5	1.9
Receiver23	23	1	0.0	76.4	66	76.4	10	Snd Lvl	70.5	5.9	5	0.9

Receiver24	24	1	0.0	69.9	66	69.9	10	Snd Lvl	67.0	2.9	5	-2.1
Receiver25	25	1	0.0	65.2	66	65.2	10	----	64.6	0.6	5	-4.4
Receiver26	26	1	0.0	73.4	66	73.4	10	Snd Lvl	69.5	3.9	5	-1.1
Receiver27	27	1	0.0	69.7	66	69.7	10	Snd Lvl	65.7	4.0	5	-1.0
Receiver28	28	1	0.0	72.4	66	72.4	10	Snd Lvl	70.2	2.2	5	-2.8
Receiver29	29	1	0.0	65.4	66	65.4	10	----	65.4	0.0	5	-5.0
Receiver30	30	1	0.0	71.3	66	71.3	10	Snd Lvl	69.3	2.0	5	-3.0
Receiver31	31	1	0.0	70.3	66	70.3	10	Snd Lvl	68.7	1.6	5	-3.4
Receiver32	32	1	0.0	64.0	66	64.0	10	----	64.0	0.0	5	-5.0
Receiver33	33	1	0.0	70.3	66	70.3	10	Snd Lvl	69.1	1.2	5	-3.8
Receiver34	34	1	0.0	68.3	66	68.3	10	Snd Lvl	66.8	1.5	5	-3.5
Receiver39	39	12	0.0	71.9	66	71.9	10	Snd Lvl	66.8	5.1	5	0.1
Receiver40	40	2	0.0	71.5	66	71.5	10	Snd Lvl	67.2	4.3	5	-0.7
Receiver55	55	2	0.0	71.7	66	71.7	10	Snd Lvl	66.8	4.9	5	-0.1
Receiver56	56	2	0.0	69.8	66	69.8	10	Snd Lvl	65.0	4.8	5	-0.2
Receiver57	57	2	0.0	71.4	66	71.4	10	Snd Lvl	67.9	3.5	5	-1.5
Receiver58	58	2	0.0	69.8	66	69.8	10	Snd Lvl	67.5	2.3	5	-2.7
Receiver59	59	2	0.0	72.6	66	72.6	10	Snd Lvl	71.6	1.0	5	-4.0
Receiver61	61	1	0.0	63.6	66	63.6	10	----	63.2	0.4	5	-4.6
Receiver62	62	1	0.0	61.4	66	61.4	10	----	61.4	0.0	5	-5.0
Receiver63	63	1	0.0	66.8	66	66.8	10	Snd Lvl	66.2	0.6	5	-4.4
Receiver64	64	1	0.0	62.6	66	62.6	10	----	62.6	0.0	5	-5.0
Receiver65	65	1	0.0	60.6	66	60.6	10	----	60.6	0.0	5	-5.0
Receiver66	66	1	0.0	60.8	66	60.8	10	----	60.8	0.0	5	-5.0
Receiver67	67	1	0.0	64.5	66	64.5	10	----	63.5	1.0	5	-4.0
Receiver68	68	1	0.0	64.8	66	64.8	10	----	64.6	0.2	5	-4.8
Receiver69	69	1	0.0	63.7	66	63.7	10	----	63.5	0.2	5	-4.8
Receiver70	70	1	0.0	62.1	66	62.1	10	----	61.9	0.2	5	-4.8
Receiver71	71	1	0.0	59.4	66	59.4	10	----	59.4	0.0	5	-5.0
Receiver72	72	1	0.0	60.1	66	60.1	10	----	60.1	0.0	5	-5.0
Receiver73	73	1	0.0	63.6	66	63.6	10	----	63.1	0.5	5	-4.5

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	71	0.0	2.3	10.6
All Impacted	45	0.0	3.2	10.6
All that meet NR Goal	17	5.1	7.5	10.6

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg7 - 12 Mile to 14 Mile - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver20	20	8	0.0	73.2	66	73.2	10	Snd Lvl	67.1	6.1	5	1.1
Receiver2	2	4	0.0	73.3	66	73.3	10	Snd Lvl	71.5	1.8	5	-3.2
Receiver3	3	8	0.0	73.6	66	73.6	10	Snd Lvl	72.7	0.9	5	-4.1
Receiver4	4	4	0.0	74.6	66	74.6	10	Snd Lvl	73.4	1.2	5	-3.8
Receiver5	5	4	0.0	74.4	66	74.4	10	Snd Lvl	71.5	2.9	5	-2.1
Receiver6	6	4	0.0	76.0	66	76.0	10	Snd Lvl	73.4	2.6	5	-2.4
Receiver7	7	4	0.0	76.7	66	76.7	10	Snd Lvl	73.2	3.5	5	-1.5
Receiver8	8	4	0.0	77.5	66	77.5	10	Snd Lvl	73.4	4.1	5	-0.9
Receiver9	9	4	0.0	77.7	66	77.7	10	Snd Lvl	72.7	5.0	5	0.0
Receiver10	10	4	0.0	77.5	66	77.5	10	Snd Lvl	73.3	4.2	5	-0.8
Receiver11	11	4	0.0	77.0	66	77.0	10	Snd Lvl	72.9	4.1	5	-0.9
Receiver12	12	4	0.0	77.4	66	77.4	10	Snd Lvl	73.2	4.2	5	-0.8
Receiver13	13	4	0.0	77.4	66	77.4	10	Snd Lvl	73.1	4.3	5	-0.7
Receiver14	14	4	0.0	78.4	66	78.4	10	Snd Lvl	72.9	5.5	5	0.5
Receiver15	15	4	0.0	78.2	66	78.2	10	Snd Lvl	73.5	4.7	5	-0.3
Receiver16	16	4	0.0	78.2	66	78.2	10	Snd Lvl	73.9	4.3	5	-0.7
Receiver17	17	4	0.0	76.8	66	76.8	10	Snd Lvl	73.3	3.5	5	-1.5
Receiver18	18	4	0.0	76.0	66	76.0	10	Snd Lvl	71.1	4.9	5	-0.1
Receiver19	19	4	0.0	76.7	66	76.7	10	Snd Lvl	69.1	7.6	5	2.6
Receiver22	22	4	0.0	72.5	66	72.5	10	Snd Lvl	66.0	6.5	5	1.5
Receiver37	36	4	0.0	73.0	66	73.0	10	Snd Lvl	66.8	6.2	5	1.2
Receiver39	37	4	0.0	72.0	66	72.0	10	Snd Lvl	67.4	4.6	5	-0.4
Receiver41	38	8	0.0	72.6	66	72.6	10	Snd Lvl	67.8	4.8	5	-0.2

Receiver43	39	4	0.0	71.2	66	71.2	10	Snd Lvl	67.9	3.3	5	-1.7
Receiver45	40	4	0.0	72.4	66	72.4	10	Snd Lvl	71.7	0.7	5	-4.3
Receiver47	41	4	0.0	76.2	66	76.2	10	Snd Lvl	72.2	4.0	5	-1.0
Receiver49	42	4	0.0	76.4	66	76.4	10	Snd Lvl	72.2	4.2	5	-0.8
Receiver51	43	4	0.0	75.7	66	75.7	10	Snd Lvl	71.4	4.3	5	-0.7
Receiver53	44	4	0.0	74.8	66	74.8	10	Snd Lvl	71.1	3.7	5	-1.3
Receiver55	45	4	0.0	74.1	66	74.1	10	Snd Lvl	70.6	3.5	5	-1.5
Receiver57	46	4	0.0	74.5	66	74.5	10	Snd Lvl	71.0	3.5	5	-1.5
Receiver59	47	4	0.0	73.4	66	73.4	10	Snd Lvl	69.8	3.6	5	-1.4
Receiver61	48	4	0.0	73.4	66	73.4	10	Snd Lvl	69.8	3.6	5	-1.4
Receiver63	49	4	0.0	73.6	66	73.6	10	Snd Lvl	70.9	2.7	5	-2.3

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	148	0.7	4.0	7.6
All Impacted	148	0.7	4.0	7.6
All that meet NR Goal	28	5.0	6.1	7.6

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg8 - 14 Mile to Rochester Rd - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	76.7	66	76.7	10	Snd Lvl	66.3	10.4	5	5.4
Receiver2	2	1	0.0	76.2	66	76.2	10	Snd Lvl	66.4	9.8	5	4.8
Receiver3	3	1	0.0	75.9	66	75.9	10	Snd Lvl	66.6	9.3	5	4.3
Receiver4	4	1	0.0	76.1	66	76.1	10	Snd Lvl	66.7	9.4	5	4.4
Receiver5	5	1	0.0	75.7	66	75.7	10	Snd Lvl	66.0	9.7	5	4.7
Receiver6	8	1	0.0	75.6	66	75.6	10	Snd Lvl	66.1	9.5	5	4.5
Receiver7	9	2	0.0	75.9	66	75.9	10	Snd Lvl	66.1	9.8	5	4.8
Receiver8	10	1	0.0	75.9	66	75.9	10	Snd Lvl	66.1	9.8	5	4.8
Receiver9	11	1	0.0	75.9	66	75.9	10	Snd Lvl	66.0	9.9	5	4.9
Receiver10	12	1	0.0	75.8	66	75.8	10	Snd Lvl	65.9	9.9	5	4.9
Receiver11	15	1	0.0	75.6	66	75.6	10	Snd Lvl	65.8	9.8	5	4.8
Receiver12	16	1	0.0	75.4	66	75.4	10	Snd Lvl	65.7	9.7	5	4.7
Second Row	17	11	0.0	64.3	66	64.3	10	----	59.3	5.0	5	0.0
Receiver14	18	1	0.0	74.9	66	74.9	10	Snd Lvl	65.5	9.4	5	4.4
Receiver15	19	2	0.0	75.8	66	75.8	10	Snd Lvl	65.7	10.1	5	5.1
Receiver17	21	1	0.0	75.2	66	75.2	10	Snd Lvl	65.5	9.7	5	4.7

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	28	5.0	9.4	10.4
All Impacted	17	9.3	9.7	10.4
All that meet NR Goal	28	5.0	9.4	10.4

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg9 - Rochester to Livernois - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver13	13	1	0.0	73.9	66	73.9	10	Snd Lvl	66.8	7.1	5	2.1
Receiver15	15	3	0.0	66.7	66	66.7	10	Snd Lvl	57.1	9.6	5	4.6
Receiver16	16	2	0.0	73.7	66	73.7	10	Snd Lvl	66.1	7.6	5	2.6
Receiver18	18	2	0.0	74.8	66	74.8	10	Snd Lvl	66.7	8.1	5	3.1
Receiver19	19	3	0.0	69.9	66	69.9	10	Snd Lvl	61.5	8.4	5	3.4
Receiver20	20	2	0.0	75.2	66	75.2	10	Snd Lvl	67.4	7.8	5	2.8
Receiver22	22	2	0.0	76.0	66	76.0	10	Snd Lvl	71.0	5.0	5	0.0
Receiver23	23	3	0.0	71.8	66	71.8	10	Snd Lvl	67.8	4.0	5	-1.0
Receiver24	24	2	0.0	76.9	66	76.9	10	Snd Lvl	72.3	4.6	5	-0.4
Receiver26	26	2	0.0	77.6	66	77.6	10	Snd Lvl	71.2	6.4	5	1.4
Receiver27	27	3	0.0	72.0	66	72.0	10	Snd Lvl	66.7	5.3	5	0.3
Receiver28	28	2	0.0	77.8	66	77.8	10	Snd Lvl	70.7	7.1	5	2.1
Receiver30	30	3	0.0	76.7	66	76.7	10	Snd Lvl	70.0	6.7	5	1.7
Receiver31	31	3	0.0	76.8	66	76.8	10	Snd Lvl	69.9	6.9	5	1.9
Receiver33	33	3	0.0	76.7	66	76.7	10	Snd Lvl	69.1	7.6	5	2.6
Receiver34	34	3	0.0	76.7	66	76.7	10	Snd Lvl	68.3	8.4	5	3.4
Receiver76	76	6	0.0	76.4	66	76.4	10	Snd Lvl	69.0	7.4	5	2.4
Receiver37	37	2	0.0	71.9	66	71.9	10	Snd Lvl	66.9	5.0	5	0.0
Receiver38	38	2	0.0	73.5	66	73.5	10	Snd Lvl	68.1	5.4	5	0.4
Receiver39	39	6	0.0	68.5	66	68.5	10	Snd Lvl	62.8	5.7	5	0.7
Receiver40	40	6	0.0	70.0	66	70.0	10	Snd Lvl	61.8	8.2	5	3.2
Receiver42	42	4	0.0	73.0	66	73.0	10	Snd Lvl	68.4	4.6	5	-0.4
Receiver43	43	4	0.0	75.0	66	75.0	10	Snd Lvl	70.9	4.1	5	-0.9

Receiver44	44	2	0.0	69.9	66	69.9	10	Snd Lvl	64.8	5.1	5	0.1
Receiver45	45	2	0.0	70.9	66	70.9	10	Snd Lvl	64.9	6.0	5	1.0
Receiver46	46	2	0.0	69.5	66	69.5	10	Snd Lvl	64.6	4.9	5	-0.1
Receiver47	47	2	0.0	70.7	66	70.7	10	Snd Lvl	64.5	6.2	5	1.2
Receiver49	49	6	0.0	73.2	66	73.2	10	Snd Lvl	68.8	4.4	5	-0.6
Receiver50	50	6	0.0	75.5	66	75.5	10	Snd Lvl	74.7	0.8	5	-4.2
Receiver51	51	2	0.0	74.1	66	74.1	10	Snd Lvl	69.6	4.5	5	-0.5
Receiver52	52	2	0.0	76.0	66	76.0	10	Snd Lvl	75.8	0.2	5	-4.8
Receiver54	54	2	0.0	71.5	66	71.5	10	Snd Lvl	66.7	4.8	5	-0.2
Receiver55	55	2	0.0	71.7	66	71.7	10	Snd Lvl	70.8	0.9	5	-4.1
Receiver56	56	6	0.0	69.3	66	69.3	10	Snd Lvl	66.7	2.6	5	-2.4
Receiver57	57	6	0.0	70.4	66	70.4	10	Snd Lvl	67.8	2.6	5	-2.4
Receiver58	58	2	0.0	71.0	66	71.0	10	Snd Lvl	66.8	4.2	5	-0.8
Receiver59	59	2	0.0	72.2	66	72.2	10	Snd Lvl	70.3	1.9	5	-3.1
Receiver60	60	2	0.0	74.3	66	74.3	10	Snd Lvl	69.4	4.9	5	-0.1
Receiver61	61	2	0.0	75.9	66	75.9	10	Snd Lvl	75.8	0.1	5	-4.9
Receiver63	63	6	0.0	74.3	66	74.3	10	Snd Lvl	69.4	4.9	5	-0.1
Receiver64	64	6	0.0	75.9	66	75.9	10	Snd Lvl	75.9	0.0	5	-5.0
Receiver65	65	3	0.0	74.7	66	74.7	10	Snd Lvl	69.9	4.8	5	-0.2
Receiver66	66	3	0.0	75.7	66	75.7	10	Snd Lvl	75.7	0.0	5	-5.0
Receiver68	68	6	0.0	75.9	66	75.9	10	Snd Lvl	69.5	6.4	5	1.4
Receiver69	69	6	0.0	76.4	66	76.4	10	Snd Lvl	76.3	0.1	5	-4.9
Receiver70	70	2	0.0	75.7	66	75.7	10	Snd Lvl	69.4	6.3	5	1.3
Receiver71	71	2	0.0	75.6	66	75.6	10	Snd Lvl	75.6	0.0	5	-5.0
Receiver73	73	6	0.0	74.4	66	74.4	10	Snd Lvl	68.4	6.0	5	1.0
Receiver74	74	6	0.0	76.1	66	76.1	10	Snd Lvl	75.3	0.8	5	-4.2
Receiver76	76	1	0.0	74.6	66	74.6	10	Snd Lvl	71.1	3.5	5	-1.5
Receiver77	77	6	0.0	74.7	66	74.7	10	Snd Lvl	74.1	0.6	5	-4.4
Receiver80	80	6	0.0	71.4	66	71.4	10	Snd Lvl	69.2	2.2	5	-2.8
Receiver82	82	6	0.0	72.0	66	72.0	10	Snd Lvl	71.5	0.5	5	-4.5
Receiver84	84	2	0.0	69.6	66	69.6	10	Snd Lvl	64.1	5.5	5	0.5
Receiver85	85	2	0.0	70.3	66	70.3	10	Snd Lvl	69.9	0.4	5	-4.6
Receiver87	87	6	0.0	62.4	66	62.4	10	----	61.6	0.8	5	-4.2
Receiver88	88	6	0.0	64.3	66	64.3	10	----	64.2	0.1	5	-4.9

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	198	0.0	4.4	9.6
All Impacted	186	0.0	4.5	9.6
All that meet NR Goal	78	5.0	6.7	9.6

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg10 - Livernois to Wattles - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	79.7	66	79.7	10	Snd Lvl	75.7	4.0	5	-1.0
Receiver2	2	5	0.0	75.5	66	75.5	10	Snd Lvl	66.3	9.2	5	4.2
Receiver3	3	4	0.0	75.9	66	75.9	10	Snd Lvl	65.3	10.6	5	5.6
Receiver4	4	5	0.0	65.3	66	65.3	10	----	59.2	6.1	5	1.1
Receiver5	5	4	0.0	73.8	66	73.8	10	Snd Lvl	64.5	9.3	5	4.3
Receiver6	6	7	0.0	77.2	66	77.2	10	Snd Lvl	64.9	12.3	5	7.3
Receiver7	7	6	0.0	77.6	66	77.6	10	Snd Lvl	66.5	11.1	5	6.1
Receiver8	8	3	0.0	68.1	66	68.1	10	Snd Lvl	61.0	7.1	5	2.1
Receiver9	9	4	0.0	80.1	66	80.1	10	Snd Lvl	70.8	9.3	5	4.3
Receiver10	10	4	0.0	82.9	66	82.9	10	Snd Lvl	73.2	9.7	5	4.7
Receiver12	12	4	0.0	82.5	66	82.5	10	Snd Lvl	71.4	11.1	5	6.1
Receiver13	13	4	0.0	76.8	66	76.8	10	Snd Lvl	68.8	8.0	5	3.0
Receiver14	14	4	0.0	68.2	66	68.2	10	Snd Lvl	64.8	3.4	5	-1.6
Receiver15	15	3	0.0	82.5	66	82.5	10	Snd Lvl	69.8	12.7	5	7.7
Receiver16	16	5	0.0	77.5	66	77.5	10	Snd Lvl	63.4	14.1	5	9.1
Receiver17	17	5	0.0	75.3	66	75.3	10	Snd Lvl	63.6	11.7	5	6.7
Receiver18	18	4	0.0	77.2	66	77.2	10	Snd Lvl	64.2	13.0	5	8.0
Receiver19	19	7	0.0	82.2	66	82.2	10	Snd Lvl	70.0	12.2	5	7.2
Receiver20	20	2	0.0	76.0	66	76.0	10	Snd Lvl	68.6	7.4	5	2.4
Receiver22	22	1	0.0	62.3	66	62.3	10	----	62.3	0.0	5	-5.0
Receiver23	23	1	0.0	65.3	66	65.3	10	----	65.3	0.0	5	-5.0
Receiver24	24	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0
Receiver25	25	1	0.0	63.5	66	63.5	10	----	63.5	0.0	5	-5.0

Receiver26	26	1	0.0	63.6	66	63.6	10	-----	63.6	0.0	5	-5.0
Receiver27	27	1	0.0	63.6	66	63.6	10	-----	63.6	0.0	5	-5.0
Receiver28	28	1	0.0	63.9	66	63.9	10	-----	63.9	0.0	5	-5.0
Receiver29	29	1	0.0	63.7	66	63.7	10	-----	63.7	0.0	5	-5.0
Receiver30	30	1	0.0	64.2	66	64.2	10	-----	64.2	0.0	5	-5.0
Receiver31	31	1	0.0	63.8	66	63.8	10	-----	63.8	0.0	5	-5.0
Receiver32	32	1	0.0	64.2	66	64.2	10	-----	64.2	0.0	5	-5.0
Receiver33	33	1	0.0	64.8	66	64.8	10	-----	64.8	0.0	5	-5.0
Receiver34	34	1	0.0	63.5	66	63.5	10	-----	63.5	0.0	5	-5.0
Receiver35	35	1	0.0	63.8	66	63.8	10	-----	63.8	0.0	5	-5.0
Receiver36	36	1	0.0	63.8	66	63.8	10	-----	63.8	0.0	5	-5.0
Receiver37	37	1	0.0	63.6	66	63.6	10	-----	63.6	0.0	5	-5.0
Receiver38	38	1	0.0	61.1	66	61.1	10	-----	61.1	0.0	5	-5.0
Receiver39	39	1	0.0	55.6	66	55.6	10	-----	55.6	0.0	5	-5.0
Receiver40	40	1	0.0	56.3	66	56.3	10	-----	56.3	0.0	5	-5.0
Receiver41	41	1	0.0	55.8	66	55.8	10	-----	55.8	0.0	5	-5.0
Receiver43	43	1	0.0	58.1	66	58.1	10	-----	58.1	0.0	5	-5.0
Receiver44	44	1	0.0	60.7	66	60.7	10	-----	60.7	0.0	5	-5.0
Receiver45	45	1	0.0	55.5	66	55.5	10	-----	55.5	0.0	5	-5.0
Receiver46	46	1	0.0	54.1	66	54.1	10	-----	54.1	0.0	5	-5.0
Huber Park	85	7	0.0	58.4	51	58.4	10	Snd Lvl	58.4	0.0	5	-5.0
Huber Park	87	7	0.0	61.8	51	61.8	10	Snd Lvl	61.8	0.0	5	-5.0
Huber Park	88	7	0.0	60.5	51	60.5	10	Snd Lvl	60.5	0.0	5	-5.0
Huber Park	92	9	0.0	49.1	66	49.1	10	-----	49.1	0.0	5	-5.0
Huber Park	93	7	0.0	57.2	66	57.2	10	-----	57.2	0.0	5	-5.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	142	0.0	3.8	14.1
All Impacted	97	0.0	8.4	14.1
All that meet NR Goal	76	6.1	10.3	14.1

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 11a
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	2	0.0	65.7	66	65.7	10	-----	64.3	1.4	5	-3.6
Receiver3	3	2	0.0	69.0	66	69.0	10	Snd Lvl	67.6	1.4	5	-3.6
Receiver4	4	2	0.0	66.8	66	66.8	10	Snd Lvl	64.9	1.9	5	-3.1
Receiver5	5	2	0.0	69.9	66	69.9	10	Snd Lvl	68.1	1.8	5	-3.2
Receiver6	6	2	0.0	65.8	66	65.8	10	-----	62.8	3.0	5	-2.0
Receiver7	7	2	0.0	68.1	66	68.1	10	Snd Lvl	65.2	2.9	5	-2.1
Receiver8	8	2	0.0	64.2	66	64.2	10	-----	60.7	3.5	5	-1.5
Receiver9	9	2	0.0	66.5	66	66.5	10	Snd Lvl	63.1	3.4	5	-1.6
Receiver10	10	2	0.0	62.3	66	62.3	10	-----	59.4	2.9	5	-2.1
Receiver11	11	2	0.0	65.8	66	65.8	10	-----	63.3	2.5	5	-2.5
Receiver12	12	2	0.0	63.9	66	63.9	10	-----	60.6	3.3	5	-1.7
Receiver13	13	2	0.0	67.8	66	67.8	10	Snd Lvl	64.6	3.2	5	-1.8
Receiver14	14	2	0.0	68.5	66	68.5	10	Snd Lvl	62.1	6.4	5	1.4
Receiver15	15	2	0.0	69.8	66	69.8	10	Snd Lvl	65.3	4.5	5	-0.5
Receiver16	16	2	0.0	69.1	66	69.1	10	Snd Lvl	62.3	6.8	5	1.8
Receiver17	17	2	0.0	69.7	66	69.7	10	Snd Lvl	65.1	4.6	5	-0.4
Receiver18	18	2	0.0	52.7	66	52.7	10	-----	47.0	5.7	5	0.7
Receiver19	19	2	0.0	57.9	66	57.9	10	-----	53.5	4.4	5	-0.6
Receiver20	20	2	0.0	56.4	66	56.4	10	-----	50.2	6.2	5	1.2
Receiver21	21	2	0.0	62.3	66	62.3	10	-----	57.5	4.8	5	-0.2
Receiver22	22	2	0.0	58.9	66	58.9	10	-----	53.9	5.0	5	0.0
Receiver23	23	2	0.0	55.4	66	55.4	10	-----	55.6	-0.2	5	-5.2
Receiver24	24	2	0.0	46.4	66	46.4	10	-----	46.9	-0.5	5	-5.5

Receiver25	25	2	0.0	49.4	66	49.4	10	----	50.1	-0.7	5	-5.7
Receiver26	26	2	0.0	54.8	66	54.8	10	----	50.6	4.2	5	-0.8
Receiver27	27	2	0.0	64.1	66	64.1	10	----	59.1	5.0	5	0.0
Receiver28	28	2	0.0	57.3	66	57.3	10	----	52.7	4.6	5	-0.4
Receiver29	29	2	0.0	66.3	66	66.3	10	Snd Lvl	61.0	5.3	5	0.3
Receiver30	30	2	0.0	65.9	66	65.9	10	----	59.0	6.9	5	1.9
Receiver31	31	2	0.0	68.4	66	68.4	10	Snd Lvl	64.3	4.1	5	-0.9
Receiver32	32	2	0.0	60.7	66	60.7	10	----	57.9	2.8	5	-2.2
Receiver33	33	2	0.0	66.4	66	66.4	10	Snd Lvl	61.7	4.7	5	-0.3
Receiver34	34	2	0.0	60.7	66	60.7	10	----	56.3	4.4	5	-0.6
Receiver35	35	2	0.0	67.3	66	67.3	10	Snd Lvl	63.3	4.0	5	-1.0
Receiver36	36	2	0.0	64.0	66	64.0	10	----	58.9	5.1	5	0.1
Receiver37	37	2	0.0	68.5	66	68.5	10	Snd Lvl	64.3	4.2	5	-0.8
Receiver38	38	2	0.0	59.8	66	59.8	10	----	55.9	3.9	5	-1.1
Receiver39	39	2	0.0	64.5	66	64.5	10	----	60.3	4.2	5	-0.8
Receiver40	40	2	0.0	55.7	66	55.7	10	----	52.0	3.7	5	-1.3
Receiver41	41	2	0.0	58.5	66	58.5	10	----	54.4	4.1	5	-0.9
Receiver42	42	2	0.0	49.8	66	49.8	10	----	47.6	2.2	5	-2.8
Receiver43	43	2	0.0	55.3	66	55.3	10	----	52.2	3.1	5	-1.9
Receiver44	44	2	0.0	57.8	66	57.8	10	----	53.5	4.3	5	-0.7
Receiver45	45	2	0.0	60.9	66	60.9	10	----	57.1	3.8	5	-1.2
Receiver47	47	2	0.0	60.5	66	60.5	10	----	59.2	1.3	5	-3.7
Receiver48	48	2	0.0	68.8	66	68.8	10	Snd Lvl	64.8	4.0	5	-1.0
Receiver49	49	2	0.0	54.5	66	54.5	10	----	55.0	-0.5	5	-5.5
Receiver50	50	2	0.0	68.6	66	68.6	10	Snd Lvl	64.4	4.2	5	-0.8
Receiver52	52	1	0.0	68.7	66	68.7	10	Snd Lvl	61.8	6.9	5	1.9
Receiver53	53	1	0.0	66.3	66	66.3	10	Snd Lvl	60.8	5.5	5	0.5
Receiver54	54	1	0.0	60.1	66	60.1	10	----	56.9	3.2	5	-1.8
Receiver55	55	1	0.0	64.0	66	64.0	10	----	57.4	6.6	5	1.6
Receiver56	56	1	0.0	66.8	66	66.8	10	Snd Lvl	60.0	6.8	5	1.8
Receiver57	57	1	0.0	70.8	66	70.8	10	Snd Lvl	62.9	7.9	5	2.9
Receiver58	58	1	0.0	68.1	66	68.1	10	Snd Lvl	60.7	7.4	5	2.4
Receiver59	59	1	0.0	63.1	66	63.1	10	----	56.4	6.7	5	1.7
Receiver60	60	1	0.0	60.8	66	60.8	10	----	54.6	6.2	5	1.2
Receiver61	61	1	0.0	71.8	66	71.8	10	Snd Lvl	64.2	7.6	5	2.6
Receiver62	62	1	0.0	66.8	66	66.8	10	Snd Lvl	60.4	6.4	5	1.4
Receiver63	63	1	0.0	63.7	66	63.7	10	----	58.2	5.5	5	0.5
Receiver64	64	1	0.0	71.9	66	71.9	10	Snd Lvl	64.1	7.8	5	2.8
Receiver65	65	1	0.0	66.6	66	66.6	10	Snd Lvl	59.8	6.8	5	1.8
Receiver66	66	1	0.0	63.7	66	63.7	10	----	57.5	6.2	5	1.2
Receiver67	67	1	0.0	70.9	66	70.9	10	Snd Lvl	63.4	7.5	5	2.5

Receiver68	68	1	0.0	66.3	66	66.3	10	Snd Lvl	59.7	6.6	5	1.6
Receiver69	69	1	0.0	62.7	66	62.7	10	----	57.1	5.6	5	0.6
Receiver70	70	1	0.0	69.8	66	69.8	10	Snd Lvl	65.7	4.1	5	-0.9
Receiver71	71	1	0.0	65.1	66	65.1	10	----	62.1	3.0	5	-2.0
Receiver72	72	1	0.0	66.6	66	66.6	10	Snd Lvl	62.2	4.4	5	-0.6
Receiver73	73	1	0.0	67.3	66	67.3	10	Snd Lvl	62.9	4.4	5	-0.6
Receiver74	74	1	0.0	66.9	66	66.9	10	Snd Lvl	62.8	4.1	5	-0.9
Receiver75	75	1	0.0	66.8	66	66.8	10	Snd Lvl	62.8	4.0	5	-1.0
Receiver76	76	1	0.0	66.3	66	66.3	10	Snd Lvl	62.6	3.7	5	-1.3
Receiver77	77	1	0.0	66.0	66	66.0	10	Snd Lvl	62.5	3.5	5	-1.5
Receiver78	78	1	0.0	65.6	66	65.6	10	----	62.1	3.5	5	-1.5
Receiver79	79	1	0.0	65.0	66	65.0	10	----	62.1	2.9	5	-2.1
Receiver80	80	1	0.0	64.8	66	64.8	10	----	62.1	2.7	5	-2.3
Receiver81	81	1	0.0	64.5	66	64.5	10	----	62.2	2.3	5	-2.7
Receiver82	82	1	0.0	63.9	66	63.9	10	----	61.9	2.0	5	-3.0
Receiver83	83	1	0.0	62.9	66	62.9	10	----	62.0	0.9	5	-4.1
Receiver84	84	1	0.0	67.2	66	67.2	10	Snd Lvl	66.9	0.3	5	-4.7
Receiver85	85	1	0.0	63.8	66	63.8	10	----	63.5	0.3	5	-4.7
Receiver86	86	1	0.0	63.7	66	63.7	10	----	63.3	0.4	5	-4.6
Receiver87	87	1	0.0	62.6	66	62.6	10	----	62.3	0.3	5	-4.7
Receiver90	90	1	0.0	62.1	66	62.1	10	----	61.8	0.3	5	-4.7
Receiver91	91	1	0.0	62.4	66	62.4	10	----	62.1	0.3	5	-4.7
Receiver92	92	1	0.0	62.5	66	62.5	10	----	62.4	0.1	5	-4.9
Receiver93	93	1	0.0	62.4	66	62.4	10	----	62.2	0.2	5	-4.8
Receiver94	94	1	0.0	62.1	66	62.1	10	----	62.0	0.1	5	-4.9

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	137	-0.7	3.8	7.9
All Impacted	53	0.3	4.8	7.9
All that meet NR Goal	35	5.0	6.4	7.9

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg 11 - Wattles to Coolidge - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.0	66	65.0	10	---	62.7	2.3	5	-2.7
Receiver2	2	1	0.0	67.8	66	67.8	10	Snd Lvl	65.3	2.5	5	-2.5
Receiver3	3	1	0.0	69.3	66	69.3	10	Snd Lvl	64.7	4.6	5	-0.4
Receiver4	4	1	0.0	69.2	66	69.2	10	Snd Lvl	65.3	3.9	5	-1.1
Receiver5	5	1	0.0	69.0	66	69.0	10	Snd Lvl	65.4	3.6	5	-1.4
Receiver6	6	1	0.0	69.6	66	69.6	10	Snd Lvl	65.6	4.0	5	-1.0
Receiver7	7	1	0.0	69.6	66	69.6	10	Snd Lvl	65.6	4.0	5	-1.0
Receiver8	8	1	0.0	69.8	66	69.8	10	Snd Lvl	65.8	4.0	5	-1.0
Receiver9	9	1	0.0	69.6	66	69.6	10	Snd Lvl	65.6	4.0	5	-1.0
Receiver10	10	1	0.0	69.7	66	69.7	10	Snd Lvl	65.7	4.0	5	-1.0
Receiver11	11	1	0.0	70.4	66	70.4	10	Snd Lvl	66.3	4.1	5	-0.9
Receiver12	12	1	0.0	70.7	66	70.7	10	Snd Lvl	66.7	4.0	5	-1.0
Receiver13	13	1	0.0	71.2	66	71.2	10	Snd Lvl	67.2	4.0	5	-1.0
Receiver14	14	1	0.0	72.4	66	72.4	10	Snd Lvl	68.3	4.1	5	-0.9
Receiver15	15	1	0.0	73.4	66	73.4	10	Snd Lvl	69.1	4.3	5	-0.7
Receiver16	16	1	0.0	74.6	66	74.6	10	Snd Lvl	70.2	4.4	5	-0.6
Receiver17	17	1	0.0	75.8	66	75.8	10	Snd Lvl	72.5	3.3	5	-1.7
Receiver18	18	1	0.0	76.0	66	76.0	10	Snd Lvl	74.2	1.8	5	-3.2
Receiver19	19	1	0.0	76.0	66	76.0	10	Snd Lvl	75.5	0.5	5	-4.5
Receiver20	20	1	0.0	75.9	66	75.9	10	Snd Lvl	75.6	0.3	5	-4.7
Receiver21	21	1	0.0	75.1	66	75.1	10	Snd Lvl	72.6	2.5	5	-2.5
Receiver22	22	1	0.0	75.5	66	75.5	10	Snd Lvl	74.8	0.7	5	-4.3
Receiver23	23	1	0.0	73.9	66	73.9	10	Snd Lvl	70.4	3.5	5	-1.5

Receiver24	24	1	0.0	73.9	66	73.9	10	Snd Lvl	69.5	4.4	5	-0.6
Receiver25	25	1	0.0	70.3	66	70.3	10	Snd Lvl	67.3	3.0	5	-2.0
Receiver26	26	1	0.0	68.2	66	68.2	10	Snd Lvl	62.1	6.1	5	1.1
Receiver27	27	1	0.0	65.6	66	65.6	10	----	63.0	2.6	5	-2.4
Receiver28	28	1	0.0	63.5	66	63.5	10	----	59.2	4.3	5	-0.7
Receiver30	30	1	0.0	67.5	66	67.5	10	Snd Lvl	64.5	3.0	5	-2.0
Receiver31	31	1	0.0	68.9	66	68.9	10	Snd Lvl	65.3	3.6	5	-1.4
Receiver32	32	1	0.0	67.3	66	67.3	10	Snd Lvl	62.9	4.4	5	-0.6
Receiver33	33	1	0.0	63.5	66	63.5	10	----	59.6	3.9	5	-1.1
Receiver34	34	1	0.0	70.0	66	70.0	10	Snd Lvl	65.7	4.3	5	-0.7
Receiver35	35	1	0.0	65.9	66	65.9	10	----	61.0	4.9	5	-0.1
Receiver36	36	1	0.0	70.4	66	70.4	10	Snd Lvl	65.5	4.9	5	-0.1
Receiver38	38	1	0.0	71.7	66	71.7	10	Snd Lvl	66.2	5.5	5	0.5
Receiver39	39	1	0.0	70.5	66	70.5	10	Snd Lvl	64.9	5.6	5	0.6
Receiver40	40	1	0.0	62.4	66	62.4	10	----	57.3	5.1	5	0.1
Receiver41	41	1	0.0	71.1	66	71.1	10	Snd Lvl	65.8	5.3	5	0.3
Receiver42	42	1	0.0	70.7	66	70.7	10	Snd Lvl	65.1	5.6	5	0.6
Receiver43	43	1	0.0	70.0	66	70.0	10	Snd Lvl	64.7	5.3	5	0.3
Receiver44	44	1	0.0	67.4	66	67.4	10	Snd Lvl	62.8	4.6	5	-0.4
Receiver45	45	1	0.0	67.2	66	67.2	10	Snd Lvl	63.0	4.2	5	-0.8
Receiver46	46	1	0.0	67.2	66	67.2	10	Snd Lvl	62.9	4.3	5	-0.7
Receiver47	47	1	0.0	66.1	66	66.1	10	Snd Lvl	62.1	4.0	5	-1.0
Receiver49	49	1	0.0	65.8	66	65.8	10	----	62.0	3.8	5	-1.2
Receiver50	50	1	0.0	65.0	66	65.0	10	----	61.6	3.4	5	-1.6
Receiver51	51	1	0.0	64.6	66	64.6	10	----	61.3	3.3	5	-1.7
Receiver52	52	1	0.0	65.2	66	65.2	10	----	61.9	3.3	5	-1.7
Receiver53	53	1	0.0	65.6	66	65.6	10	----	62.4	3.2	5	-1.8
Receiver54	54	1	0.0	64.3	66	64.3	10	----	61.9	2.4	5	-2.6
Receiver55	55	1	0.0	62.7	66	62.7	10	----	61.3	1.4	5	-3.6
Receiver57	57	8	0.0	71.1	66	71.1	10	Snd Lvl	66.5	4.6	5	-0.4
Receiver58	58	6	0.0	75.0	66	75.0	10	Snd Lvl	66.1	8.9	5	3.9
Receiver59	59	8	0.0	76.5	66	76.5	10	Snd Lvl	65.7	10.8	5	5.8
Receiver60	60	6	0.0	67.8	66	67.8	10	Snd Lvl	62.4	5.4	5	0.4
Receiver61	61	4	0.0	67.9	66	67.9	10	Snd Lvl	63.5	4.4	5	-0.6
Receiver62	62	4	0.0	64.2	66	64.2	10	----	56.6	7.6	5	2.6
Receiver63	63	4	0.0	62.3	66	62.3	10	----	59.7	2.6	5	-2.4
Receiver64	64	4	0.0	58.8	66	58.8	10	----	58.6	0.2	5	-4.8
Receiver65	65	4	0.0	60.4	66	60.4	10	----	60.4	0.0	5	-5.0
Receiver66	66	4	0.0	62.2	66	62.2	10	----	60.9	1.3	5	-3.7
Receiver67	67	4	0.0	66.4	66	66.4	10	Snd Lvl	63.5	2.9	5	-2.1
Receiver68	68	4	0.0	73.2	66	73.2	10	Snd Lvl	64.4	8.8	5	3.8

Receiver69	69	4	0.0	75.6	66	75.6	10	Snd Lvl	64.6	11.0	5	6.0
Receiver70	70	4	0.0	76.8	66	76.8	10	Snd Lvl	67.0	9.8	5	4.8
Receiver71	71	4	0.0	75.4	66	75.4	10	Snd Lvl	67.3	8.1	5	3.1
Receiver72	72	4	0.0	66.4	66	66.4	10	Snd Lvl	63.0	3.4	5	-1.6
Receiver73	73	4	0.0	57.2	66	57.2	10	----	56.7	0.5	5	-4.5
Receiver74	74	4	0.0	54.8	66	54.8	10	----	53.1	1.7	5	-3.3
Receiver75	75	4	0.0	54.0	66	54.0	10	----	53.3	0.7	5	-4.3
Receiver76	76	4	0.0	54.9	66	54.9	10	----	54.4	0.5	5	-4.5
Receiver77	77	4	0.0	59.8	66	59.8	10	----	59.6	0.2	5	-4.8
Receiver87	87	4	0.0	63.2	66	63.2	10	----	59.1	4.1	5	-0.9
Receiver89	89	3	0.0	66.7	66	66.7	10	Snd Lvl	62.9	3.8	5	-1.2
Receiver90	90	3	0.0	67.5	66	67.5	10	Snd Lvl	66.9	0.6	5	-4.4
Firefighter Park	92	4	0.0	69.3	66	69.3	10	Snd Lvl	63.9	5.4	5	0.4
Firefighter Park	93	4	0.0	69.2	66	69.2	10	Snd Lvl	63.9	5.3	5	0.3
Firefighter Park	94	4	0.0	70.1	66	70.1	10	Snd Lvl	64.4	5.7	5	0.7
Firefighter Park	95	4	0.0	70.8	66	70.8	10	Snd Lvl	64.4	6.4	5	1.4
Firefighter Park	96	4	0.0	71.6	66	71.6	10	Snd Lvl	65.4	6.2	5	1.2
Firefighter Park	97	4	0.0	72.1	66	72.1	10	Snd Lvl	66.0	6.1	5	1.1
Firefighter Park	98	4	0.0	72.2	66	72.2	10	Snd Lvl	66.2	6.0	5	1.0
Firefighter Park	99	4	0.0	72.1	66	72.1	10	Snd Lvl	66.1	6.0	5	1.0
Firefighter Park	100	4	0.0	66.7	66	66.7	10	Snd Lvl	62.4	4.3	5	-0.7

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	194	0.0	4.1	11.0
All Impacted	137	0.3	4.7	11.0
All that meet NR Goal	79	5.1	6.8	11.0

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg12 - Coolidge to Adams - Build
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	64.5	66	64.5	10	----	64.3	0.2	5	-4.8
Receiver2	2	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	5	-5.0
Receiver3	3	1	0.0	62.5	66	62.5	10	----	62.5	0.0	5	-5.0
Receiver4	4	1	0.0	62.8	66	62.8	10	----	62.6	0.2	5	-4.8
Receiver5	5	1	0.0	65.3	66	65.3	10	----	65.3	0.0	5	-5.0
Receiver6	6	1	0.0	67.0	66	67.0	10	Snd Lvl	66.8	0.2	5	-4.8
Receiver7	7	1	0.0	69.3	66	69.3	10	Snd Lvl	69.0	0.3	5	-4.7
Receiver8	8	1	0.0	73.7	66	73.7	10	Snd Lvl	72.0	1.7	5	-3.3
Receiver10	10	1	0.0	69.2	66	69.2	10	Snd Lvl	64.1	5.1	5	0.1
Receiver11	11	1	0.0	69.9	66	69.9	10	Snd Lvl	65.3	4.6	5	-0.4
Receiver12	12	1	0.0	71.7	66	71.7	10	Snd Lvl	66.1	5.6	5	0.6
Receiver13	13	1	0.0	69.9	66	69.9	10	Snd Lvl	66.5	3.4	5	-1.6
Receiver14	14	1	0.0	68.5	66	68.5	10	Snd Lvl	66.6	1.9	5	-3.1
Receiver15	15	1	0.0	67.4	66	67.4	10	Snd Lvl	65.4	2.0	5	-3.0
Receiver16	16	1	0.0	67.2	66	67.2	10	Snd Lvl	65.1	2.1	5	-2.9
Receiver17	17	1	0.0	66.2	66	66.2	10	Snd Lvl	63.9	2.3	5	-2.7
Receiver18	18	1	0.0	59.2	66	59.2	10	----	59.2	0.0	5	-5.0
Receiver19	19	1	0.0	55.9	66	55.9	10	----	55.9	0.0	5	-5.0
Receiver20	20	1	0.0	56.9	66	56.9	10	----	56.9	0.0	5	-5.0
Receiver21	21	1	0.0	61.8	66	61.8	10	----	61.8	0.0	5	-5.0
Receiver22	22	1	0.0	56.9	66	56.9	10	----	56.9	0.0	5	-5.0
Receiver23	23	1	0.0	62.7	66	62.7	10	----	62.7	0.0	5	-5.0
Receiver24	24	1	0.0	61.2	66	61.2	10	----	61.2	0.0	5	-5.0

Receiver25	25	1	0.0	59.4	66	59.4	10	----	59.4	0.0	5	-5.0
Receiver26	26	1	0.0	59.5	66	59.5	10	----	59.5	0.0	5	-5.0
Receiver27	27	1	0.0	58.6	66	58.6	10	----	58.6	0.0	5	-5.0
Receiver28	28	1	0.0	57.2	66	57.2	10	----	57.2	0.0	5	-5.0
Receiver29	29	1	0.0	57.7	66	57.7	10	----	57.7	0.0	5	-5.0
Receiver30	30	1	0.0	59.2	66	59.2	10	----	59.2	0.0	5	-5.0
Receiver31	31	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0
Receiver32	32	1	0.0	67.1	66	67.1	10	Snd Lvl	67.0	0.1	5	-4.9
Receiver33	33	1	0.0	65.6	66	65.6	10	----	65.3	0.3	5	-4.7
Receiver34	34	1	0.0	66.5	66	66.5	10	Snd Lvl	66.2	0.3	5	-4.7
Receiver35	35	1	0.0	64.6	66	64.6	10	----	64.2	0.4	5	-4.6
Receiver36	36	1	0.0	66.3	66	66.3	10	Snd Lvl	65.0	1.3	5	-3.7
Receiver37	37	1	0.0	63.9	66	63.9	10	----	61.0	2.9	5	-2.1
Receiver38	38	1	0.0	64.8	66	64.8	10	----	61.0	3.8	5	-1.2
Receiver39	39	1	0.0	65.3	66	65.3	10	----	60.8	4.5	5	-0.5
Receiver40	40	1	0.0	67.4	66	67.4	10	Snd Lvl	60.4	7.0	5	2.0
Receiver41	41	1	0.0	65.0	66	65.0	10	----	60.2	4.8	5	-0.2
Receiver42	42	1	0.0	59.1	66	59.1	10	----	54.8	4.3	5	-0.7
Receiver43	43	1	0.0	56.7	66	56.7	10	----	55.3	1.4	5	-3.6
Receiver44	44	1	0.0	57.1	66	57.1	10	----	56.1	1.0	5	-4.0
Receiver45	45	1	0.0	56.0	66	56.0	10	----	53.5	2.5	5	-2.5
Receiver46	46	1	0.0	72.0	66	72.0	10	Snd Lvl	66.9	5.1	5	0.1
Receiver47	47	1	0.0	72.5	66	72.5	10	Snd Lvl	69.9	2.6	5	-2.4
Receiver48	48	1	0.0	71.7	66	71.7	10	Snd Lvl	68.4	3.3	5	-1.7
Receiver49	49	1	0.0	69.4	66	69.4	10	Snd Lvl	64.6	4.8	5	-0.2
Receiver50	50	1	0.0	63.2	66	63.2	10	----	59.2	4.0	5	-1.0
Receiver51	51	1	0.0	61.9	66	61.9	10	----	58.0	3.9	5	-1.1
Receiver52	52	1	0.0	70.7	66	70.7	10	Snd Lvl	64.4	6.3	5	1.3
Receiver53	53	1	0.0	66.6	66	66.6	10	Snd Lvl	60.7	5.9	5	0.9
Receiver54	54	1	0.0	67.2	66	67.2	10	Snd Lvl	63.2	4.0	5	-1.0
Receiver55	55	1	0.0	75.9	66	75.9	10	Snd Lvl	68.4	7.5	5	2.5
Receiver56	56	1	0.0	68.1	66	68.1	10	Snd Lvl	67.1	1.0	5	-4.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	55	0.0	2.0	7.5
All Impacted	25	0.0	3.1	7.5
All that meet NR Goal	7	5.1	6.1	7.5

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg12a - Coolidge to North Limit - Walls
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver16	16	1	0.0	63.3	66	63.3	10	----	63.1	0.2	5	-4.8
Receiver17	17	1	0.0	63.4	66	63.4	10	----	63.2	0.2	5	-4.8
Receiver18	18	1	0.0	61.8	66	61.8	10	----	61.8	0.0	5	-5.0
Receiver19	19	1	0.0	64.7	66	64.7	10	----	64.7	0.0	5	-5.0
Receiver20	20	1	0.0	51.1	66	51.1	10	----	51.0	0.1	5	-4.9
Receiver21	21	1	0.0	52.1	66	52.1	10	----	51.9	0.2	5	-4.8
Receiver22	22	1	0.0	61.0	66	61.0	10	----	60.9	0.1	5	-4.9
Receiver23	23	1	0.0	64.4	66	64.4	10	----	64.4	0.0	5	-5.0
Receiver24	24	1	0.0	63.3	66	63.3	10	----	63.3	0.0	5	-5.0
Receiver25	25	1	0.0	56.5	66	56.5	10	----	56.4	0.1	5	-4.9
Receiver26	26	1	0.0	54.2	66	54.2	10	----	54.1	0.1	5	-4.9
Receiver27	27	1	0.0	56.0	66	56.0	10	----	55.9	0.1	5	-4.9
Receiver28	28	1	0.0	54.0	66	54.0	10	----	53.8	0.2	5	-4.8
Receiver29	29	1	0.0	53.2	66	53.2	10	----	52.1	1.1	5	-3.9
Receiver30	30	1	0.0	52.0	66	52.0	10	----	51.0	1.0	5	-4.0
Receiver31	31	1	0.0	51.2	66	51.2	10	----	50.2	1.0	5	-4.0
Receiver32	32	1	0.0	48.3	66	48.3	10	----	48.5	-0.2	5	-5.2
Receiver33	33	1	0.0	54.3	66	54.3	10	----	54.1	0.2	5	-4.8
Receiver34	34	1	0.0	65.8	66	65.8	10	----	65.2	0.6	5	-4.4
Receiver35	35	1	0.0	55.8	66	55.8	10	----	53.1	2.7	5	-2.3
Receiver37	37	1	0.0	50.6	66	50.6	10	----	50.4	0.2	5	-4.8
Receiver38	38	1	0.0	69.2	66	69.2	10	Snd Lvl	68.5	0.7	5	-4.3
Receiver39	39	1	0.0	70.8	66	70.8	10	Snd Lvl	69.3	1.5	5	-3.5

Receiver40	40	1	0.0	73.6	66	73.6	10	Snd Lvl	70.3	3.3	5	-1.7
Receiver42	42	1	0.0	75.1	66	75.1	10	Snd Lvl	68.2	6.9	5	1.9
Receiver44	44	1	0.0	61.5	66	61.5	10	----	57.6	3.9	5	-1.1
Receiver45	45	1	0.0	62.5	66	62.5	10	----	62.4	0.1	5	-4.9
Receiver46	46	1	0.0	64.6	66	64.6	10	----	64.1	0.5	5	-4.5
Receiver47	47	1	0.0	62.8	66	62.8	10	----	62.4	0.4	5	-4.6
Receiver48	48	1	0.0	61.8	66	61.8	10	----	61.5	0.3	5	-4.7
Receiver49	49	1	0.0	55.1	66	55.1	10	----	55.1	0.0	5	-5.0
Receiver50	50	1	0.0	56.6	66	56.6	10	----	55.3	1.3	5	-3.7
Receiver51	51	1	0.0	53.3	66	53.3	10	----	51.1	2.2	5	-2.8
Receiver52	52	1	0.0	57.7	66	57.7	10	----	56.2	1.5	5	-3.5
Receiver53	53	1	0.0	56.2	66	56.2	10	----	56.0	0.2	5	-4.8
Receiver54	54	1	0.0	50.9	66	50.9	10	----	51.2	-0.3	5	-5.3
Receiver55	55	1	0.0	49.9	66	49.9	10	----	50.0	-0.1	5	-5.1
Receiver56	56	1	0.0	74.1	66	74.1	10	Snd Lvl	67.1	7.0	5	2.0
Receiver57	57	1	0.0	68.0	66	68.0	10	Snd Lvl	61.8	6.2	5	1.2
Receiver58	58	1	0.0	61.7	66	61.7	10	----	58.3	3.4	5	-1.6
Receiver59	59	1	0.0	60.1	66	60.1	10	----	57.3	2.8	5	-2.2
Receiver60	60	1	0.0	54.3	66	54.3	10	----	54.4	-0.1	5	-5.1
Receiver61	61	1	0.0	60.1	66	60.1	10	----	56.2	3.9	5	-1.1
Receiver63	63	1	0.0	64.8	66	64.8	10	----	64.8	0.0	5	-5.0
Receiver65	65	1	0.0	75.9	66	75.9	10	Snd Lvl	69.8	6.1	5	1.1
Receiver66	66	1	0.0	67.7	66	67.7	10	Snd Lvl	61.2	6.5	5	1.5
Receiver67	67	1	0.0	54.2	66	54.2	10	----	54.2	0.0	5	-5.0
Receiver68	68	1	0.0	59.8	66	59.8	10	----	56.3	3.5	5	-1.5
Receiver69	69	1	0.0	63.1	66	63.1	10	----	58.6	4.5	5	-0.5
Receiver70	70	1	0.0	53.4	66	53.4	10	----	53.6	-0.2	5	-5.2
Receiver71	71	1	0.0	68.1	66	68.1	10	Snd Lvl	60.5	7.6	5	2.6
Receiver72	72	1	0.0	53.5	66	53.5	10	----	53.6	-0.1	5	-5.1
Receiver73	73	1	0.0	63.5	66	63.5	10	----	59.5	4.0	5	-1.0
Receiver74	74	1	0.0	53.4	66	53.4	10	----	52.6	0.8	5	-4.2
Receiver75	75	1	0.0	73.9	66	73.9	10	Snd Lvl	65.3	8.6	5	3.6
Receiver76	76	1	0.0	70.7	66	70.7	10	Snd Lvl	61.6	9.1	5	4.1
Receiver77	77	1	0.0	65.8	66	65.8	10	----	58.4	7.4	5	2.4
Receiver78	78	1	0.0	55.2	66	55.2	10	----	55.0	0.2	5	-4.8
Receiver79	79	1	0.0	60.4	66	60.4	10	----	55.0	5.4	5	0.4
Receiver80	80	1	0.0	63.0	66	63.0	10	----	56.6	6.4	5	1.4
Receiver81	81	1	0.0	69.4	66	69.4	10	Snd Lvl	60.4	9.0	5	4.0
Receiver82	82	1	0.0	75.0	66	75.0	10	Snd Lvl	65.7	9.3	5	4.3
Receiver83	83	1	0.0	70.0	66	70.0	10	Snd Lvl	62.4	7.6	5	2.6
Receiver84	84	1	0.0	63.4	66	63.4	10	----	57.6	5.8	5	0.8

Receiver86	86	1	0.0	68.9	66	68.9	10	Snd Lvl	60.3	8.6	5	3.6
Receiver87	87	1	0.0	67.5	66	67.5	10	Snd Lvl	63.7	3.8	5	-1.2
Receiver88	88	1	0.0	55.9	66	55.9	10	----	55.3	0.6	5	-4.4
Receiver89	89	1	0.0	66.3	66	66.3	10	Snd Lvl	60.4	5.9	5	0.9
Receiver90	90	1	0.0	69.2	66	69.2	10	Snd Lvl	63.2	6.0	5	1.0
Receiver92	92	1	0.0	74.3	66	74.3	10	Snd Lvl	64.0	10.3	5	5.3
Receiver94	94	1	0.0	62.5	66	62.5	10	----	60.5	2.0	5	-3.0
Receiver95	95	1	0.0	62.3	66	62.3	10	----	57.8	4.5	5	-0.5
Receiver96	96	1	0.0	54.6	66	54.6	10	----	54.1	0.5	5	-4.5
Receiver97	97	1	0.0	53.5	66	53.5	10	----	53.0	0.5	5	-4.5
Receiver98	98	1	0.0	64.9	66	64.9	10	----	63.6	1.3	5	-3.7
Receiver99	99	1	0.0	59.5	66	59.5	10	----	56.6	2.9	5	-2.1
Receiver100	100	1	0.0	59.5	66	59.5	10	----	56.5	3.0	5	-2.0
Receiver101	101	1	0.0	59.0	66	59.0	10	----	56.1	2.9	5	-2.1
Receiver102	102	1	0.0	53.8	66	53.8	10	----	53.7	0.1	5	-4.9
Receiver103	103	1	0.0	58.6	66	58.6	10	----	57.0	1.6	5	-3.4
Receiver104	104	1	0.0	59.9	66	59.9	10	----	57.0	2.9	5	-2.1
Receiver105	105	1	0.0	55.0	66	55.0	10	----	54.4	0.6	5	-4.4
Receiver106	106	1	0.0	57.2	66	57.2	10	----	57.0	0.2	5	-4.8
Receiver107	107	1	0.0	62.8	66	62.8	10	----	62.4	0.4	5	-4.6
Receiver108	108	1	0.0	63.0	66	63.0	10	----	62.3	0.7	5	-4.3
Receiver109	109	1	0.0	62.5	66	62.5	10	----	61.9	0.6	5	-4.4
Receiver110	110	1	0.0	51.6	66	51.6	10	----	51.2	0.4	5	-4.6
Receiver111	111	1	0.0	58.4	66	58.4	10	----	57.5	0.9	5	-4.1
Receiver112	112	1	0.0	56.3	66	56.3	10	----	54.7	1.6	5	-3.4
Receiver113	113	1	0.0	51.8	66	51.8	10	----	51.7	0.1	5	-4.9
Receiver114	114	1	0.0	52.1	66	52.1	10	----	51.8	0.3	5	-4.7
Receiver115	115	1	0.0	55.1	66	55.1	10	----	55.2	-0.1	5	-5.1
Receiver116	116	1	0.0	57.0	66	57.0	10	----	56.9	0.1	5	-4.9
Receiver117	117	1	0.0	50.1	66	50.1	10	----	49.7	0.4	5	-4.6
Receiver118	118	1	0.0	55.8	66	55.8	10	----	55.4	0.4	5	-4.6
Receiver119	119	1	0.0	52.2	66	52.2	10	----	52.0	0.2	5	-4.8
Receiver120	120	1	0.0	49.1	66	49.1	10	----	49.1	0.0	5	-5.0
Receiver121	121	1	0.0	52.7	66	52.7	10	----	52.6	0.1	5	-4.9
Receiver126	126	1	0.0	54.7	66	54.7	10	----	54.5	0.2	5	-4.8
Receiver127	127	1	0.0	51.8	66	51.8	10	----	51.8	0.0	5	-5.0
Receiver128	128	1	0.0	52.1	66	52.1	10	----	52.1	0.0	5	-5.0
Receiver129	129	1	0.0	52.6	66	52.6	10	----	52.2	0.4	5	-4.6
Receiver130	130	1	0.0	56.3	66	56.3	10	----	55.2	1.1	5	-3.9
Receiver131	131	1	0.0	56.2	66	56.2	10	----	54.0	2.2	5	-2.8
Receiver132	132	1	0.0	61.2	66	61.2	10	----	59.2	2.0	5	-3.0

Receiver133	133	1	0.0	53.6	66	53.6	10	----	53.7	-0.1	5	-5.1
Receiver134	134	1	0.0	55.4	66	55.4	10	----	55.0	0.4	5	-4.6
Receiver135	135	1	0.0	60.9	66	60.9	10	----	56.8	4.1	5	-0.9
Receiver136	136	1	0.0	62.4	66	62.4	10	----	57.9	4.5	5	-0.5
Receiver137	137	1	0.0	54.1	66	54.1	10	----	53.6	0.5	5	-4.5
Receiver138	138	1	0.0	58.1	66	58.1	10	----	55.9	2.2	5	-2.8
Receiver140	140	1	0.0	70.6	66	70.6	10	Snd Lvl	70.6	0.0	5	-5.0
Receiver142	142	1	0.0	69.7	66	69.7	10	Snd Lvl	69.7	0.0	5	-5.0
Receiver143	143	1	0.0	67.4	66	67.4	10	Snd Lvl	67.4	0.0	5	-5.0
Receiver144	144	1	0.0	68.4	66	68.4	10	Snd Lvl	68.4	0.0	5	-5.0
Receiver145	145	1	0.0	68.8	66	68.8	10	Snd Lvl	68.7	0.1	5	-4.9
Receiver146	146	1	0.0	68.1	66	68.1	10	Snd Lvl	68.1	0.0	5	-5.0
Receiver147	147	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	5	-5.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	118	-0.3	2.0	10.3
All Impacted	26	0.0	4.8	10.3
All that meet NR Goal	19	5.4	7.4	10.3

RESULTS: SOUND LEVELS

I-75 Noise

The Corradino Group
John Bucher

22 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Square Lake Interchange
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
GC6	1	5	0.0	72.4	66	72.4	10	Snd Lvl	72.4	0.0	5	-5.0
GC3	2	5	0.0	63.1	66	63.1	10	----	63.1	0.0	5	-5.0
GC2	3	5	0.0	57.0	66	57.0	10	----	57.0	0.0	5	-5.0
GC1	4	5	0.0	51.2	66	51.2	10	----	51.2	0.0	5	-5.0
Receiver5	5	4	0.0	50.3	66	50.3	10	----	50.3	0.0	5	-5.0
Receiver6	6	4	0.0	48.9	66	48.9	10	----	48.9	0.0	5	-5.0
Receiver7	7	4	0.0	50.3	66	50.3	10	----	50.3	0.0	5	-5.0
Receiver8	8	4	0.0	50.0	66	50.0	10	----	50.0	0.0	5	-5.0
Receiver9	9	1	0.0	54.0	66	54.0	10	----	54.0	0.0	5	-5.0
GC5	10	5	0.0	60.6	66	60.6	10	----	60.6	0.0	5	-5.0
Receiver12	12	1	0.0	66.0	66	66.0	10	Snd Lvl	66.0	0.0	5	-5.0
Receiver13	13	1	0.0	65.1	66	65.1	10	----	65.1	0.0	5	-5.0
Receiver14	14	1	0.0	62.5	66	62.5	10	----	62.5	0.0	5	-5.0
Receiver15	15	1	0.0	61.1	66	61.1	10	----	61.1	0.0	5	-5.0
Receiver16	16	1	0.0	62.4	66	62.4	10	----	62.4	0.0	5	-5.0
Receiver17	17	1	0.0	61.5	66	61.5	10	----	61.5	0.0	5	-5.0
Receiver18	18	1	0.0	60.7	66	60.7	10	----	60.7	0.0	5	-5.0
Receiver19	19	1	0.0	59.8	66	59.8	10	----	59.8	0.0	5	-5.0
Receiver20	20	1	0.0	59.4	66	59.4	10	----	59.4	0.0	5	-5.0
Receiver21	21	1	0.0	59.1	66	59.1	10	----	59.1	0.0	5	-5.0
Receiver22	22	1	0.0	58.0	66	58.0	10	----	58.0	0.0	5	-5.0
Receiver23	23	1	0.0	57.5	66	57.5	10	----	57.5	0.0	5	-5.0
Receiver24	24	1	0.0	55.8	66	55.8	10	----	55.8	0.0	5	-5.0

Receiver25	25	1	0.0	55.9	66	55.9	10	----	55.9	0.0	5	-5.0
Receiver26	26	1	0.0	55.1	66	55.1	10	----	55.1	0.0	5	-5.0
Receiver27	27	1	0.0	54.4	66	54.4	10	----	54.4	0.0	5	-5.0
Receiver28	28	1	0.0	53.5	66	53.5	10	----	53.5	0.0	5	-5.0
Receiver29	29	1	0.0	47.4	66	47.4	10	----	47.4	0.0	5	-5.0
Receiver30	30	1	0.0	49.8	66	49.8	10	----	49.8	0.0	5	-5.0
Receiver31	31	1	0.0	50.1	66	50.1	10	----	50.1	0.0	5	-5.0
Receiver32	32	1	0.0	58.0	66	58.0	10	----	58.0	0.0	5	-5.0
Receiver33	33	1	0.0	57.1	66	57.1	10	----	57.1	0.0	5	-5.0
Receiver34	34	1	0.0	57.7	66	57.7	10	----	57.7	0.0	5	-5.0
Receiver35	35	1	0.0	58.1	66	58.1	10	----	58.1	0.0	5	-5.0
Receiver37	37	1	0.0	56.5	66	56.5	10	----	56.5	0.0	5	-5.0
Receiver38	38	1	0.0	56.4	66	56.4	10	----	56.4	0.0	5	-5.0
Receiver39	39	1	0.0	56.3	66	56.3	10	----	56.3	0.0	5	-5.0
Receiver40	40	1	0.0	52.3	66	52.3	10	----	52.3	0.0	5	-5.0
Receiver41	41	1	0.0	52.7	66	52.7	10	----	52.7	0.0	5	-5.0
Receiver43	43	1	0.0	57.2	66	57.2	10	----	57.2	0.0	5	-5.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	72	0.0	0.0	0.0
All Impacted	6	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

APPENDIX G
SOUND LEVEL RESULTS FOR ALL RECEIVERS WITH OPTIMIZED NOISE WALLS

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Segment 1 - PB Design
BARRIER DESIGN: NB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver13	13	1	0.0	76.8	66	76.8	10	Snd Lvl	69.7	7.1	5	2.1
Receiver14	14	1	0.0	64.3	66	64.3	10	----	58.9	5.4	5	0.4
Receiver15	15	1	0.0	59.5	66	59.5	10	----	54.4	5.1	5	0.1
Receiver16	16	1	0.0	65.1	66	65.1	10	----	57.2	7.9	5	2.9
Receiver17	17	1	0.0	65.7	66	65.7	10	----	59.8	5.9	5	0.9
Receiver18	18	1	0.0	67.3	66	67.3	10	Snd Lvl	59.8	7.5	5	2.5
Receiver19	19	1	0.0	76.9	66	76.9	10	Snd Lvl	70.0	6.9	5	1.9
Receiver20	20	1	0.0	71.7	66	71.7	10	Snd Lvl	64.2	7.5	5	2.5
Receiver21	21	1	0.0	69.2	66	69.2	10	Snd Lvl	64.2	5.0	5	0.0
Receiver22	22	1	0.0	66.7	66	66.7	10	Snd Lvl	61.1	5.6	5	0.6
Receiver23	23	1	0.0	67.0	66	67.0	10	Snd Lvl	57.5	9.5	5	4.5
Receiver24	24	1	0.0	68.7	66	68.7	10	Snd Lvl	58.8	9.9	5	4.9
Receiver25	25	1	0.0	72.0	66	72.0	10	Snd Lvl	61.3	10.7	5	5.7

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	13	5.0	7.2	10.7
All Impacted	9	5.0	7.7	10.7
All that meet NR Goal	13	5.0	7.2	10.7

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Segment 1 - PB Design
BARRIER DESIGN: NB2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver26	26	1	0.0	72.2	66	72.2	10	Snd Lvl	64.1	8.1	5	3.1
Receiver27	27	1	0.0	67.0	66	67.0	10	Snd Lvl	60.0	7.0	5	2.0
Receiver28	28	1	0.0	66.4	66	66.4	10	Snd Lvl	59.9	6.5	5	1.5
Receiver29	29	1	0.0	74.2	66	74.2	10	Snd Lvl	66.1	8.1	5	3.1
Receiver30	30	1	0.0	74.0	66	74.0	10	Snd Lvl	64.4	9.6	5	4.6
Receiver31	31	1	0.0	67.1	66	67.1	10	Snd Lvl	58.1	9.0	5	4.0
Receiver32	32	1	0.0	59.6	66	59.6	10	-----	55.0	4.6	5	-0.4
Receiver33	33	1	0.0	59.1	66	59.1	10	-----	54.7	4.4	5	-0.6
Receiver34	34	1	0.0	61.7	66	61.7	10	-----	55.9	5.8	5	0.8
Receiver35	35	1	0.0	65.9	66	65.9	10	-----	57.8	8.1	5	3.1
Receiver36	36	1	0.0	76.0	66	76.0	10	Snd Lvl	66.0	10.0	5	5.0
Receiver37	37	1	0.0	72.2	66	72.2	10	Snd Lvl	64.6	7.6	5	2.6
Receiver38	38	1	0.0	64.2	66	64.2	10	-----	58.8	5.4	5	0.4
Receiver39	39	1	0.0	61.8	66	61.8	10	-----	57.5	4.3	5	-0.7
Receiver40	40	1	0.0	59.4	66	59.4	10	-----	54.5	4.9	5	-0.1
Receiver41	41	1	0.0	62.8	66	62.8	10	-----	56.5	6.3	5	1.3
Receiver42	42	1	0.0	71.2	66	71.2	10	Snd Lvl	62.4	8.8	5	3.8
Receiver43	43	1	0.0	69.5	66	69.5	10	Snd Lvl	63.5	6.0	5	1.0
Receiver44	44	1	0.0	65.1	66	65.1	10	-----	60.0	5.1	5	0.1
Receiver45	45	1	0.0	52.4	66	52.4	10	-----	51.0	1.4	5	-3.6
Receiver46	46	1	0.0	55.1	66	55.1	10	-----	53.9	1.2	5	-3.8
Receiver47	47	1	0.0	61.1	66	61.1	10	-----	60.9	0.2	5	-4.8
Receiver48	48	1	0.0	63.1	66	63.1	10	-----	63.1	0.0	5	-5.0

Receiver49	49	1	0.0	57.0	66	57.0	10	----	56.9	0.1	5	-4.9
Receiver50	50	1	0.0	55.0	66	55.0	10	----	54.1	0.9	5	-4.1
Receiver51	51	1	0.0	64.4	66	64.4	10	----	62.8	1.6	5	-3.4
Receiver52	52	1	0.0	63.1	66	63.1	10	----	63.0	0.1	5	-4.9

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	27	0.0	5.0	10.0
All Impacted	10	6.0	8.1	10.0
All that meet NR Goal	15	5.1	7.4	10.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Segment 1 - PB Design
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver53	53	1	0.0	64.0	66	64.0	10	----	63.0	1.0	5	-4.0
Receiver54	54	1	0.0	62.1	66	62.1	10	----	60.7	1.4	5	-3.6
Receiver55	55	1	0.0	62.8	66	62.8	10	----	59.9	2.9	5	-2.1
Receiver56	56	1	0.0	66.7	66	66.7	10	Snd Lvl	62.7	4.0	5	-1.0
Receiver57	57	1	0.0	57.1	66	57.1	10	----	52.0	5.1	5	0.1
Receiver58	58	1	0.0	64.9	66	64.9	10	----	58.5	6.4	5	1.4
Receiver59	59	1	0.0	68.3	66	68.3	10	Snd Lvl	60.3	8.0	5	3.0
Receiver60	60	1	0.0	61.6	66	61.6	10	----	56.0	5.6	5	0.6
Receiver61	61	1	0.0	68.1	66	68.1	10	Snd Lvl	59.4	8.7	5	3.7
Receiver62	62	1	0.0	61.5	66	61.5	10	----	54.4	7.1	5	2.1
Receiver63	63	1	0.0	69.3	66	69.3	10	Snd Lvl	60.8	8.5	5	3.5
Receiver64	64	1	0.0	61.1	66	61.1	10	----	53.5	7.6	5	2.6
Receiver65	65	1	0.0	53.8	66	53.8	10	----	52.3	1.5	5	-3.5
Receiver66	66	1	0.0	57.0	66	57.0	10	----	53.8	3.2	5	-1.8
Receiver67	67	1	0.0	58.3	66	58.3	10	----	57.6	0.7	5	-4.3
Receiver68	68	1	0.0	74.4	66	74.4	10	Snd Lvl	74.3	0.1	5	-4.9
Receiver69	69	1	0.0	72.0	66	72.0	10	Snd Lvl	72.0	0.0	5	-5.0
Receiver80	80	1	0.0	57.6	66	57.6	10	----	52.8	4.8	5	-0.2
Receiver81	81	1	0.0	56.2	66	56.2	10	----	55.2	1.0	5	-4.0

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	19	0.0	4.1	8.7

All Impacted	6	0.0	4.9	8.7
All that meet NR Goal	8	5.1	7.1	8.7

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg2 - Meyers to John R - Walls
BARRIER DESIGN: NB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
First Free Will Baptist Church	3	9	0.0	74.9	66	74.9	10	Snd Lvl	67.3	7.6	5	2.6
United Oaks Elementary	73	21	0.0	56.0	66	56.0	10	----	51.0	5.0	5	0.0
Hazel Park Jr High	74	43	0.0	53.0	66	53.0	10	----	50.2	2.8	5	-2.2
Receiver85	85	1	0.0	68.3	66	68.3	10	Snd Lvl	65.7	2.6	5	-2.4
Receiver86	86	1	0.0	63.6	66	63.6	10	----	61.1	2.5	5	-2.5
Receiver87	87	1	0.0	59.7	66	59.7	10	----	58.1	1.6	5	-3.4
Receiver88	88	1	0.0	69.3	66	69.3	10	Snd Lvl	65.1	4.2	5	-0.8
Receiver89	89	1	0.0	60.6	66	60.6	10	----	57.8	2.8	5	-2.2
Receiver90	90	1	0.0	57.2	66	57.2	10	----	55.7	1.5	5	-3.5
Receiver91	91	1	0.0	72.6	66	72.6	10	Snd Lvl	64.5	8.1	5	3.1
Receiver92	92	1	0.0	65.9	66	65.9	10	----	59.3	6.6	5	1.6
Receiver93	93	1	0.0	62.6	66	62.6	10	----	56.6	6.0	5	1.0
Receiver94	94	1	0.0	59.3	66	59.3	10	----	54.8	4.5	5	-0.5
Receiver95	95	1	0.0	57.8	66	57.8	10	----	53.5	4.3	5	-0.7
Receiver97	97	1	0.0	73.7	66	73.7	10	Snd Lvl	64.2	9.5	5	4.5
Receiver98	98	1	0.0	72.3	66	72.3	10	Snd Lvl	63.0	9.3	5	4.3
Receiver99	99	1	0.0	71.5	66	71.5	10	Snd Lvl	61.7	9.8	5	4.8
Receiver100	100	1	0.0	70.0	66	70.0	10	Snd Lvl	60.5	9.5	5	4.5
Receiver101	101	1	0.0	68.3	66	68.3	10	Snd Lvl	59.6	8.7	5	3.7
Receiver102	102	1	0.0	66.2	66	66.2	10	Snd Lvl	58.3	7.9	5	2.9
Receiver103	103	1	0.0	75.4	66	75.4	10	Snd Lvl	64.0	11.4	5	6.4
Receiver104	104	1	0.0	73.1	66	73.1	10	Snd Lvl	61.8	11.3	5	6.3
Receiver105	105	1	0.0	68.0	66	68.0	10	Snd Lvl	58.9	9.1	5	4.1

Receiver106	106	1	0.0	68.0	66	68.0	10	Snd Lvl	58.7	9.3	5	4.3
Receiver107	107	1	0.0	68.1	66	68.1	10	Snd Lvl	59.5	8.6	5	3.6
Receiver108	108	1	0.0	67.4	66	67.4	10	Snd Lvl	58.2	9.2	5	4.2
Receiver109	109	1	0.0	66.1	66	66.1	10	Snd Lvl	57.5	8.6	5	3.6
Receiver110	110	1	0.0	64.0	66	64.0	10	----	56.6	7.4	5	2.4
Receiver111	111	1	0.0	63.0	66	63.0	10	----	56.0	7.0	5	2.0
Receiver114	114	1	0.0	73.5	66	73.5	10	Snd Lvl	65.0	8.5	5	3.5
Receiver115	115	1	0.0	72.2	66	72.2	10	Snd Lvl	63.2	9.0	5	4.0
Receiver116	116	1	0.0	71.2	66	71.2	10	Snd Lvl	63.1	8.1	5	3.1
Receiver117	117	1	0.0	66.6	66	66.6	10	Snd Lvl	59.1	7.5	5	2.5
Receiver118	118	1	0.0	65.2	66	65.2	10	----	57.9	7.3	5	2.3
Receiver119	119	1	0.0	64.3	66	64.3	10	----	57.0	7.3	5	2.3
Receiver120	120	1	0.0	62.6	66	62.6	10	----	55.9	6.7	5	1.7
Receiver121	121	1	0.0	61.3	66	61.3	10	----	55.2	6.1	5	1.1
Receiver123	123	1	0.0	74.4	66	74.4	10	Snd Lvl	67.8	6.6	5	1.6
Receiver124	124	1	0.0	71.0	66	71.0	10	Snd Lvl	66.6	4.4	5	-0.6
Receiver125	125	1	0.0	70.9	66	70.9	10	Snd Lvl	65.8	5.1	5	0.1
Receiver126	126	1	0.0	68.4	66	68.4	10	Snd Lvl	63.3	5.1	5	0.1
Receiver127	127	1	0.0	65.7	66	65.7	10	----	60.1	5.6	5	0.6
Receiver128	128	1	0.0	62.0	66	62.0	10	----	56.4	5.6	5	0.6
Receiver129	129	1	0.0	59.5	66	59.5	10	----	54.8	4.7	5	-0.3
Receiver130	130	1	0.0	58.2	66	58.2	10	----	53.3	4.9	5	-0.1
Receiver131	131	1	0.0	56.8	66	56.8	10	----	53.2	3.6	5	-1.4
Receiver132	132	1	0.0	55.5	66	55.5	10	----	52.7	2.8	5	-2.2
Receiver133	133	1	0.0	55.7	66	55.7	10	----	52.6	3.1	5	-1.9
Receiver134	134	1	0.0	56.7	66	56.7	10	----	53.2	3.5	5	-1.5
Receiver135	135	1	0.0	73.9	66	73.9	10	Snd Lvl	66.2	7.7	5	2.7
Receiver136	136	1	0.0	71.9	66	71.9	10	Snd Lvl	64.8	7.1	5	2.1
Receiver137	137	1	0.0	70.9	66	70.9	10	Snd Lvl	63.9	7.0	5	2.0
Receiver138	138	1	0.0	70.0	66	70.0	10	Snd Lvl	63.7	6.3	5	1.3
Receiver139	139	1	0.0	69.3	66	69.3	10	Snd Lvl	63.9	5.4	5	0.4
Receiver140	140	1	0.0	68.3	66	68.3	10	Snd Lvl	62.2	6.1	5	1.1
Receiver141	141	1	0.0	65.2	66	65.2	10	----	65.0	0.2	5	-4.8
Receiver142	142	1	0.0	64.8	66	64.8	10	----	60.2	4.6	5	-0.4
Receiver143	143	1	0.0	65.8	66	65.8	10	----	62.8	3.0	5	-2.0
Receiver144	144	1	0.0	65.5	66	65.5	10	----	61.8	3.7	5	-1.3
Receiver145	145	1	0.0	61.5	66	61.5	10	----	56.7	4.8	5	-0.2
Receiver146	146	1	0.0	61.2	66	61.2	10	----	56.8	4.4	5	-0.6
Receiver147	147	1	0.0	60.2	66	60.2	10	----	55.8	4.4	5	-0.6
Receiver148	148	1	0.0	57.8	66	57.8	10	----	54.1	3.7	5	-1.3
Receiver149	149	1	0.0	59.0	66	59.0	10	----	54.1	4.9	5	-0.1

Receiver150	150	1	0.0	58.0	66	58.0	10	----	53.3	4.7	5	-0.3
Receiver151	151	1	0.0	55.7	66	55.7	10	----	53.1	2.6	5	-2.4
Receiver152	152	1	0.0	57.1	66	57.1	10	----	52.9	4.2	5	-0.8
Receiver153	153	1	0.0	56.0	66	56.0	10	----	52.3	3.7	5	-1.3

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	138	0.2	5.9	11.4
All Impacted	39	2.6	7.7	11.4
All that meet NR Goal	67	5.0	7.6	11.4

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg2 - Meyers to John R - Walls
BARRIER DESIGN: SB1
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver25	25	1	0.0	71.0	66	71.0	10	Snd Lvl	66.0	5.0	5	0.0
Receiver28	28	1	0.0	68.1	66	68.1	10	Snd Lvl	63.0	5.1	5	0.1
Receiver29	29	1	0.0	72.1	66	72.1	10	Snd Lvl	64.0	8.1	5	3.1
Receiver30	30	1	0.0	75.8	66	75.8	10	Snd Lvl	66.7	9.1	5	4.1
Receiver31	31	1	0.0	74.4	66	74.4	10	Snd Lvl	64.3	10.1	5	5.1
Receiver33	33	1	0.0	70.9	66	70.9	10	Snd Lvl	62.4	8.5	5	3.5
Receiver35	35	1	0.0	70.9	66	70.9	10	Snd Lvl	63.2	7.7	5	2.7
Receiver38	38	1	0.0	67.2	66	67.2	10	Snd Lvl	62.0	5.2	5	0.2
Receiver54	54	1	0.0	69.1	66	69.1	10	Snd Lvl	65.2	3.9	5	-1.1
Receiver56	56	1	0.0	67.9	66	67.9	10	Snd Lvl	59.6	8.3	5	3.3
Receiver58	58	1	0.0	65.9	66	65.9	10	----	58.6	7.3	5	2.3
Receiver60	60	1	0.0	65.6	66	65.6	10	----	59.5	6.1	5	1.1
Receiver76	76	1	0.0	67.8	66	67.8	10	Snd Lvl	61.7	6.1	5	1.1
Receiver78	78	1	0.0	69.1	66	69.1	10	Snd Lvl	63.7	5.4	5	0.4
Receiver79	79	1	0.0	70.7	66	70.7	10	Snd Lvl	64.2	6.5	5	1.5
Receiver81	81	1	0.0	66.3	66	66.3	10	Snd Lvl	61.0	5.3	5	0.3
Receiver83	83	1	0.0	66.5	66	66.5	10	Snd Lvl	59.5	7.0	5	2.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	17	3.9	6.7	10.1
All Impacted	15	3.9	6.8	10.1
All that meet NR Goal	16	5.0	6.9	10.1

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg3 - 9 Mile to Woodward Hts - Walls
BARRIER DESIGN: NB1
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver3	3	1	0.0	74.3	66	74.3	10	Snd Lvl	66.9	7.4	5	2.4
Receiver4	4	1	0.0	68.0	66	68.0	10	Snd Lvl	63.6	4.4	5	-0.6
Receiver5	5	1	0.0	65.2	66	65.2	10	----	59.9	5.3	5	0.3
Receiver6	6	1	0.0	74.5	66	74.5	10	Snd Lvl	66.1	8.4	5	3.4
Receiver7	7	1	0.0	69.5	66	69.5	10	Snd Lvl	62.7	6.8	5	1.8
Receiver8	8	1	0.0	67.8	66	67.8	10	Snd Lvl	60.0	7.8	5	2.8
Receiver9	9	1	0.0	74.3	66	74.3	10	Snd Lvl	64.8	9.5	5	4.5
Receiver10	10	1	0.0	67.9	66	67.9	10	Snd Lvl	58.6	9.3	5	4.3
Receiver11	11	1	0.0	63.0	66	63.0	10	----	55.2	7.8	5	2.8
Receiver12	12	1	0.0	73.3	66	73.3	10	Snd Lvl	63.8	9.5	5	4.5
Receiver13	13	1	0.0	70.0	66	70.0	10	Snd Lvl	60.0	10.0	5	5.0
Receiver14	14	1	0.0	66.5	66	66.5	10	Snd Lvl	57.1	9.4	5	4.4
Receiver16	16	1	0.0	73.7	66	73.7	10	Snd Lvl	64.4	9.3	5	4.3
Receiver17	17	1	0.0	68.0	66	68.0	10	Snd Lvl	59.5	8.5	5	3.5
Receiver18	18	1	0.0	64.8	66	64.8	10	----	56.4	8.4	5	3.4
Receiver19	19	1	0.0	73.0	66	73.0	10	Snd Lvl	64.4	8.6	5	3.6
Receiver20	20	1	0.0	69.0	66	69.0	10	Snd Lvl	60.7	8.3	5	3.3
Receiver21	21	1	0.0	66.6	66	66.6	10	Snd Lvl	58.2	8.4	5	3.4
Receiver25	25	1	0.0	69.3	66	69.3	10	Snd Lvl	62.0	7.3	5	2.3
Receiver26	26	1	0.0	62.2	66	62.2	10	----	55.9	6.3	5	1.3
Receiver27	27	1	0.0	73.0	66	73.0	10	Snd Lvl	66.2	6.8	5	1.8
Receiver28	28	1	0.0	69.2	66	69.2	10	Snd Lvl	62.2	7.0	5	2.0
Receiver29	29	1	0.0	66.2	66	66.2	10	Snd Lvl	59.1	7.1	5	2.1

Receiver30	30	1	0.0	70.2	66	70.2	10	Snd Lvl	63.9	6.3	5	1.3
Receiver31	31	1	0.0	62.4	66	62.4	10	---	58.0	4.4	5	-0.6

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	25	4.4	7.7	10.0
All Impacted	20	4.4	8.0	10.0
All that meet NR Goal	23	5.3	8.0	10.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg3 - 9 Mile to Woodward Hts - Walls
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver34	34	1	0.0	63.0	66	63.0	10	----	62.9	0.1	5	-4.9
Receiver35	35	1	0.0	68.1	66	68.1	10	Snd Lvl	67.0	1.1	5	-3.9
Receiver36	36	1	0.0	69.3	66	69.3	10	Snd Lvl	66.9	2.4	5	-2.6
Receiver38	38	1	0.0	65.0	66	65.0	10	----	58.6	6.4	5	1.4
Receiver40	40	1	0.0	65.5	66	65.5	10	----	58.6	6.9	5	1.9
Receiver41	41	8	0.0	75.6	66	75.6	10	Snd Lvl	66.3	9.3	5	4.3
Receiver42	42	1	0.0	64.2	66	64.2	10	----	58.7	5.5	5	0.5
Receiver43	43	2	0.0	75.2	66	75.2	10	Snd Lvl	68.7	6.5	5	1.5
Receiver50 2nd Floor	50	2	0.0	78.6	66	78.6	10	Snd Lvl	69.8	8.8	5	3.8
Receiver51 2nd Floor	51	8	0.0	79.6	66	79.6	10	Snd Lvl	68.3	11.3	5	6.3

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	26	0.1	5.8	11.3
All Impacted	22	1.1	6.6	11.3
All that meet NR Goal	23	5.5	7.8	11.3

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg4 - Woodward Hts to I-696 - Walls
BARRIER DESIGN: NB1
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	1	0.0	69.7	66	69.7	10	Snd Lvl	64.7	5.0	5	0.0
Receiver3 (second row)	3	1	0.0	65.0	66	65.0	10	----	62.0	3.0	5	-2.0
Receiver5	5	1	0.0	73.0	66	73.0	10	Snd Lvl	63.9	9.1	5	4.1
Receiver6	6	1	0.0	73.7	66	73.7	10	Snd Lvl	64.8	8.9	5	3.9
Receiver8	8	1	0.0	72.5	66	72.5	10	Snd Lvl	67.7	4.8	5	-0.2
Receiver56	56	1	0.0	64.5	66	64.5	10	----	62.1	2.4	5	-2.6
Receiver57	57	1	0.0	65.8	66	65.8	10	----	64.0	1.8	5	-3.2
Receiver92	92	1	0.0	66.3	66	66.3	10	Snd Lvl	58.5	7.8	5	2.8
Receiver93	93	1	0.0	64.8	66	64.8	10	----	58.8	6.0	5	1.0
Serenity Christian Church	4	8	0.0	73.4	66	73.4	10	Snd Lvl	64.3	9.1	5	4.1

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	17	1.8	5.8	9.1
All Impacted	13	4.8	7.4	9.1
All that meet NR Goal	13	5.0	7.6	9.1

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg4 - Woodward Hts to I-696 - Walls
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver12	12	1	0.0	66.7	66	66.7	10	Snd Lvl	64.8	1.9	5	-3.1
Receiver13	13	1	0.0	69.1	66	69.1	10	Snd Lvl	68.1	1.0	5	-4.0
Receiver46	46	1	0.0	64.8	66	64.8	10	----	63.2	1.6	5	-3.4
Receiver47	47	1	0.0	64.2	66	64.2	10	----	62.6	1.6	5	-3.4
Receiver48	48	1	0.0	62.6	66	62.6	10	----	61.0	1.6	5	-3.4

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	5	1.0	1.5	1.9
All Impacted	2	1.0	1.4	1.9
All that meet NR Goal	0	0.0	0.0	0.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg4 - Woodward Hts to I-696 - Walls
BARRIER DESIGN: SB2

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver14	14	1	0.0	68.7	66	68.7	10	Snd Lvl	66.7	2.0	5	-3.0
Receiver19	19	1	0.0	68.4	66	68.4	10	Snd Lvl	62.2	6.2	5	1.2
Receiver22	22	1	0.0	70.8	66	70.8	10	Snd Lvl	63.6	7.2	5	2.2
Receiver58	58	1	0.0	69.0	66	69.0	10	Snd Lvl	61.5	7.5	5	2.5
Receiver63	63	1	0.0	72.7	66	72.7	10	Snd Lvl	65.5	7.2	5	2.2
Receiver64	64	1	0.0	62.4	66	62.4	10	-----	57.2	5.2	5	0.2
Receiver65	65	1	0.0	68.6	66	68.6	10	Snd Lvl	62.4	6.2	5	1.2
Receiver66	66	1	0.0	62.2	66	62.2	10	----	58.9	3.3	5	-1.7
Receiver68	68	1	0.0	63.7	66	63.7	10	----	58.5	5.2	5	0.2
Receiver70	70	1	0.0	65.8	66	65.8	10	----	59.6	6.2	5	1.2
Receiver71	71	1	0.0	68.7	66	68.7	10	Snd Lvl	62.7	6.0	5	1.0
Receiver79	79	1	0.0	57.1	66	57.1	10	----	51.5	5.6	5	0.6
Receiver80	80	1	0.0	60.0	66	60.0	10	----	53.6	6.4	5	1.4
Receiver82	82	1	0.0	62.9	66	62.9	10	----	56.1	6.8	5	1.8
Receiver83	83	1	0.0	62.1	66	62.1	10	----	54.7	7.4	5	2.4
Receiver84	84	1	0.0	64.9	66	64.9	10	----	57.4	7.5	5	2.5
Receiver85	85	1	0.0	63.2	66	63.2	10	----	56.7	6.5	5	1.5
Roosevelt Elementary	95	7	0.0	68.4	66	68.4	10	Snd Lvl	61.0	7.4	5	2.4

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	24	2.0	6.1	7.5
All Impacted	14	2.0	6.2	7.5

All that meet NR Goal	22	5.2	6.5	7.5

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 3
BARRIER DESIGN: Braid
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver4	4	1	0.0	68.9	66	68.9	10	Snd Lvl	68.3	0.6	5	-4.4
Receiver5	5	1	0.0	65.0	66	65.0	10	----	63.7	1.3	5	-3.7
Receiver6	6	1	0.0	62.3	66	62.3	10	----	61.1	1.2	5	-3.8
Receiver7	7	1	0.0	61.6	66	61.6	10	----	60.7	0.9	5	-4.1
Receiver12	12	1	0.0	74.6	66	74.6	10	Snd Lvl	74.5	0.1	5	-4.9
Receiver13	13	1	0.0	69.4	66	69.4	10	Snd Lvl	68.7	0.7	5	-4.3
Receiver14	14	1	0.0	66.4	66	66.4	10	Snd Lvl	65.8	0.6	5	-4.4
Receiver15	15	1	0.0	63.7	66	63.7	10	----	62.7	1.0	5	-4.0
Receiver16	16	1	0.0	62.8	66	62.8	10	----	61.9	0.9	5	-4.1
Receiver17	17	1	0.0	63.3	66	63.3	10	----	61.9	1.4	5	-3.6
Receiver22	22	1	0.0	71.3	66	71.3	10	Snd Lvl	71.2	0.1	5	-4.9
Receiver23	23	1	0.0	68.3	66	68.3	10	Snd Lvl	68.2	0.1	5	-4.9
Receiver24	24	1	0.0	60.1	66	60.1	10	----	59.4	0.7	5	-4.3
Receiver25	25	1	0.0	61.5	66	61.5	10	----	60.9	0.6	5	-4.4
Receiver26	26	1	0.0	62.0	66	62.0	10	----	61.0	1.0	5	-4.0
Receiver27	27	1	0.0	62.6	66	62.6	10	----	61.6	1.0	5	-4.0
Receiver32	32	1	0.0	73.2	66	73.2	10	Snd Lvl	73.1	0.1	5	-4.9
Receiver33	33	1	0.0	67.6	66	67.6	10	Snd Lvl	67.5	0.1	5	-4.9
Receiver34	34	1	0.0	62.6	66	62.6	10	----	62.4	0.2	5	-4.8
Receiver35	35	1	0.0	60.7	66	60.7	10	----	60.3	0.4	5	-4.6
Receiver36	36	1	0.0	62.5	66	62.5	10	----	61.5	1.0	5	-4.0
Receiver37	37	1	0.0	62.4	66	62.4	10	----	61.5	0.9	5	-4.1
Receiver38	38	1	0.0	62.1	66	62.1	10	----	61.3	0.8	5	-4.2

Receiver44	44	1	0.0	67.4	66	67.4	10	Snd Lvl	65.4	2.0	5	-3.0
Receiver45	45	1	0.0	64.5	66	64.5	10	----	60.9	3.6	5	-1.4
Receiver46	46	1	0.0	62.9	66	62.9	10	----	60.0	2.9	5	-2.1
Receiver47	47	1	0.0	61.7	66	61.7	10	----	59.2	2.5	5	-2.5
Receiver48	48	1	0.0	61.9	66	61.9	10	----	60.1	1.8	5	-3.2
Receiver49	49	1	0.0	62.2	66	62.2	10	----	60.9	1.3	5	-3.7
Receiver50	50	1	0.0	62.5	66	62.5	10	----	61.3	1.2	5	-3.8
Receiver51	51	1	0.0	62.4	66	62.4	10	----	61.3	1.1	5	-3.9
Receiver52	52	1	0.0	72.9	66	72.9	10	Snd Lvl	71.2	1.7	5	-3.3
Receiver53	53	1	0.0	64.8	66	64.8	10	----	63.1	1.7	5	-3.3
Receiver54	54	1	0.0	63.1	66	63.1	10	----	61.3	1.8	5	-3.2
Receiver55	55	1	0.0	62.9	66	62.9	10	----	61.0	1.9	5	-3.1
Receiver56	56	1	0.0	62.5	66	62.5	10	----	60.6	1.9	5	-3.1
Receiver57	57	1	0.0	62.3	66	62.3	10	----	60.5	1.8	5	-3.2
Receiver58	58	1	0.0	62.1	66	62.1	10	----	60.4	1.7	5	-3.3
Receiver59	59	1	0.0	62.0	66	62.0	10	----	60.4	1.6	5	-3.4
Receiver60	60	1	0.0	71.5	66	71.5	10	Snd Lvl	67.1	4.4	5	-0.6
Receiver61	61	1	0.0	65.5	66	65.5	10	----	62.1	3.4	5	-1.6
Receiver62	62	1	0.0	57.8	66	57.8	10	----	56.3	1.5	5	-3.5
Receiver63	63	1	0.0	59.6	66	59.6	10	----	58.9	0.7	5	-4.3
Receiver64	64	1	0.0	61.4	66	61.4	10	----	59.5	1.9	5	-3.1
Receiver65	65	1	0.0	61.6	66	61.6	10	----	59.6	2.0	5	-3.0
Receiver66	66	1	0.0	61.5	66	61.5	10	----	59.5	2.0	5	-3.0
Receiver67	67	1	0.0	61.4	66	61.4	10	----	59.5	1.9	5	-3.1
Receiver69	69	1	0.0	71.3	66	71.3	10	Snd Lvl	68.5	2.8	5	-2.2
Receiver70	70	1	0.0	56.7	66	56.7	10	----	55.0	1.7	5	-3.3
Receiver71	71	1	0.0	58.5	66	58.5	10	----	57.4	1.1	5	-3.9
Receiver72	72	1	0.0	58.3	66	58.3	10	----	57.5	0.8	5	-4.2
Receiver73	73	1	0.0	59.1	66	59.1	10	----	58.5	0.6	5	-4.4
Receiver74	74	1	0.0	59.9	66	59.9	10	----	58.9	1.0	5	-4.0
Receiver75	75	1	0.0	60.3	66	60.3	10	----	59.0	1.3	5	-3.7
Receiver76	76	1	0.0	60.4	66	60.4	10	----	58.9	1.5	5	-3.5
Receiver78	78	1	0.0	68.6	66	68.6	10	Snd Lvl	67.1	1.5	5	-3.5
Receiver79	79	1	0.0	56.7	66	56.7	10	----	55.8	0.9	5	-4.1
Receiver80	80	1	0.0	56.9	66	56.9	10	----	56.0	0.9	5	-4.1
Receiver81	81	1	0.0	58.3	66	58.3	10	----	57.3	1.0	5	-4.0
Receiver82	82	1	0.0	59.5	66	59.5	10	----	58.1	1.4	5	-3.6
Receiver83	83	1	0.0	59.5	66	59.5	10	----	58.6	0.9	5	-4.1
Receiver88	88	1	0.0	67.9	66	67.9	10	Snd Lvl	65.3	2.6	5	-2.4
Receiver89	89	1	0.0	61.4	66	61.4	10	----	58.5	2.9	5	-2.1
Receiver90	90	1	0.0	61.8	66	61.8	10	----	59.6	2.2	5	-2.8

RESULTS: SOUND LEVELS **I-75 Noise**

Receiver91	91	1	0.0	60.3	66	60.3	10	----	58.9	1.4	5	-3.6
Receiver92	92	1	0.0	59.8	66	59.8	10	----	58.9	0.9	5	-4.1
Receiver93	93	1	0.0	60.2	66	60.2	10	----	59.3	0.9	5	-4.1
Receiver94	94	1	0.0	60.3	66	60.3	10	----	59.4	0.9	5	-4.1
Receiver222	222	1	0.0	69.2	66	69.2	10	Snd Lvl	68.5	0.7	5	-4.3
Receiver223	223	1	0.0	65.4	66	65.4	10	----	64.4	1.0	5	-4.0
Receiver225	225	1	0.0	65.4	66	65.4	10	----	64.8	0.6	5	-4.4
Receiver226	226	1	0.0	66.4	66	66.4	10	Snd Lvl	66.1	0.3	5	-4.7
Receiver227	227	1	0.0	67.4	66	67.4	10	Snd Lvl	67.0	0.4	5	-4.6
Receiver228	228	1	0.0	65.2	66	65.2	10	----	64.6	0.6	5	-4.4
Receiver229	229	1	0.0	65.6	66	65.6	10	----	65.1	0.5	5	-4.5
Receiver230	230	1	0.0	66.4	66	66.4	10	Snd Lvl	66.0	0.4	5	-4.6
Receiver231	231	1	0.0	64.7	66	64.7	10	----	64.1	0.6	5	-4.4
Receiver232	232	1	0.0	65.1	66	65.1	10	----	64.5	0.6	5	-4.4
Receiver233	233	1	0.0	65.7	66	65.7	10	----	65.2	0.5	5	-4.5

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	79	0.1	1.3	4.4
All Impacted	18	0.1	1.1	4.4
All that meet NR Goal	0	0.0	0.0	0.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 3
BARRIER DESIGN: North
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver99	99	1	0.0	67.8	66	67.8	10	Snd Lvl	65.6	2.2	5	-2.8
Receiver100	100	1	0.0	63.2	66	63.2	10	----	62.4	0.8	5	-4.2
Receiver104	104	1	0.0	72.6	66	72.6	10	Snd Lvl	70.8	1.8	5	-3.2
Receiver105	105	1	0.0	72.4	66	72.4	10	Snd Lvl	70.7	1.7	5	-3.3
Receiver106	106	1	0.0	71.9	66	71.9	10	Snd Lvl	70.4	1.5	5	-3.5
Receiver107	107	1	0.0	71.3	66	71.3	10	Snd Lvl	69.9	1.4	5	-3.6
Receiver108	108	1	0.0	70.6	66	70.6	10	Snd Lvl	69.4	1.2	5	-3.8
Receiver109	109	1	0.0	70.1	66	70.1	10	Snd Lvl	69.0	1.1	5	-3.9
Receiver110	110	1	0.0	69.2	66	69.2	10	Snd Lvl	68.2	1.0	5	-4.0
Receiver111	111	1	0.0	68.7	66	68.7	10	Snd Lvl	67.8	0.9	5	-4.1
Receiver112	112	1	0.0	67.6	66	67.6	10	Snd Lvl	66.8	0.8	5	-4.2
Receiver114	114	1	0.0	63.5	66	63.5	10	----	62.2	1.3	5	-3.7
Receiver115	115	1	0.0	63.2	66	63.2	10	----	61.8	1.4	5	-3.6
Receiver116	116	1	0.0	62.8	66	62.8	10	----	62.0	0.8	5	-4.2
Receiver117	117	1	0.0	61.2	66	61.2	10	----	60.4	0.8	5	-4.2
Receiver118	118	1	0.0	60.1	66	60.1	10	----	59.0	1.1	5	-3.9
Receiver119	119	1	0.0	58.7	66	58.7	10	----	57.9	0.8	5	-4.2
Receiver120	120	1	0.0	58.9	66	58.9	10	----	58.5	0.4	5	-4.6
Receiver121	121	1	0.0	59.0	66	59.0	10	----	58.2	0.8	5	-4.2
Receiver122	122	1	0.0	59.1	66	59.1	10	----	58.0	1.1	5	-3.9
Receiver123	123	1	0.0	59.3	66	59.3	10	----	58.4	0.9	5	-4.1
Receiver124	124	1	0.0	59.7	66	59.7	10	----	58.5	1.2	5	-3.8
Receiver125	125	1	0.0	75.6	66	75.6	10	Snd Lvl	72.6	3.0	5	-2.0

Receiver126	126	1	0.0	74.6	66	74.6	10	Snd Lvl	71.8	2.8	5	-2.2
Receiver127	127	1	0.0	74.3	66	74.3	10	Snd Lvl	71.3	3.0	5	-2.0
Receiver128	128	1	0.0	73.9	66	73.9	10	Snd Lvl	70.4	3.5	5	-1.5
Receiver129	129	1	0.0	73.5	66	73.5	10	Snd Lvl	69.3	4.2	5	-0.8
Receiver131	131	1	0.0	65.9	66	65.9	10	----	65.3	0.6	5	-4.4
Receiver132	132	1	0.0	65.0	66	65.0	10	----	64.4	0.6	5	-4.4
Receiver133	133	1	0.0	64.0	66	64.0	10	----	63.1	0.9	5	-4.1
Receiver134	134	1	0.0	64.1	66	64.1	10	----	62.4	1.7	5	-3.3
Receiver135	135	1	0.0	65.5	66	65.5	10	----	62.2	3.3	5	-1.7
Receiver136	136	1	0.0	66.5	66	66.5	10	Snd Lvl	65.9	0.6	5	-4.4
Receiver138	138	1	0.0	70.3	66	70.3	10	Snd Lvl	66.2	4.1	5	-0.9
Receiver139	139	1	0.0	68.1	66	68.1	10	Snd Lvl	63.4	4.7	5	-0.3
Receiver140	140	1	0.0	68.5	66	68.5	10	Snd Lvl	62.6	5.9	5	0.9
Receiver141	141	1	0.0	73.1	66	73.1	10	Snd Lvl	66.2	6.9	5	1.9
Receiver142	142	1	0.0	72.4	66	72.4	10	Snd Lvl	65.3	7.1	5	2.1
Receiver143	143	1	0.0	64.8	66	64.8	10	----	59.1	5.7	5	0.7
Receiver144	144	1	0.0	65.9	66	65.9	10	----	59.8	6.1	5	1.1
Receiver145	145	1	0.0	66.8	66	66.8	10	Snd Lvl	60.7	6.1	5	1.1
Receiver146	146	1	0.0	66.0	66	66.0	10	Snd Lvl	60.1	5.9	5	0.9
Receiver147	147	1	0.0	67.5	66	67.5	10	Snd Lvl	61.1	6.4	5	1.4
Receiver150	150	1	0.0	62.6	66	62.6	10	----	60.5	2.1	5	-2.9
Receiver151	151	1	0.0	61.6	66	61.6	10	----	59.6	2.0	5	-3.0
Receiver152	152	1	0.0	61.4	66	61.4	10	----	59.0	2.4	5	-2.6
Receiver153	153	1	0.0	63.0	66	63.0	10	----	59.0	4.0	5	-1.0
Receiver154	154	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver155	155	1	0.0	63.7	66	63.7	10	----	59.9	3.8	5	-1.2
Receiver156	156	1	0.0	64.3	66	64.3	10	----	59.9	4.4	5	-0.6
Receiver157	157	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver158	158	1	0.0	65.1	66	65.1	10	----	60.2	4.9	5	-0.1
Receiver160	160	1	0.0	77.8	66	77.8	10	Snd Lvl	71.1	6.7	5	1.7
Receiver161	161	1	0.0	77.2	66	77.2	10	Snd Lvl	70.2	7.0	5	2.0
Receiver162	162	1	0.0	76.5	66	76.5	10	Snd Lvl	69.3	7.2	5	2.2
Receiver163	163	1	0.0	72.4	66	72.4	10	Snd Lvl	64.3	8.1	5	3.1
Receiver164	164	1	0.0	74.8	66	74.8	10	Snd Lvl	66.5	8.3	5	3.3
Receiver165	165	1	0.0	73.9	66	73.9	10	Snd Lvl	64.4	9.5	5	4.5
Receiver167	167	1	0.0	79.9	51	79.9	10	Snd Lvl	74.9	5.0	5	0.0
Receiver169	169	1	0.0	78.7	51	78.7	10	Snd Lvl	73.8	4.9	5	-0.1
Receiver170	170	1	0.0	76.7	51	76.7	10	Snd Lvl	70.6	6.1	5	1.1
Receiver171	171	1	0.0	77.4	51	77.4	10	Snd Lvl	71.2	6.2	5	1.2
Receiver172	172	1	0.0	77.9	51	77.9	10	Snd Lvl	71.7	6.2	5	1.2
Receiver173	173	1	0.0	76.3	51	76.3	10	Snd Lvl	69.6	6.7	5	1.7

Receiver176	176	1	0.0	74.7	66	74.7	10	Snd Lvl	60.3	14.4	5	9.4
Receiver177	177	1	0.0	72.2	66	72.2	10	Snd Lvl	60.2	12.0	5	7.0
Receiver178	178	1	0.0	68.4	66	68.4	10	Snd Lvl	60.4	8.0	5	3.0
Receiver179	179	1	0.0	68.9	66	68.9	10	Snd Lvl	60.6	8.3	5	3.3
Receiver180	180	1	0.0	69.9	66	69.9	10	Snd Lvl	61.0	8.9	5	3.9
Receiver181	181	1	0.0	70.8	66	70.8	10	Snd Lvl	61.3	9.5	5	4.5
Receiver182	182	1	0.0	71.6	66	71.6	10	Snd Lvl	61.8	9.8	5	4.8
Receiver183	183	1	0.0	66.4	66	66.4	10	Snd Lvl	60.4	6.0	5	1.0
Receiver184	184	1	0.0	65.9	66	65.9	10	----	60.0	5.9	5	0.9
Receiver185	185	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver186	186	1	0.0	64.4	66	64.4	10	----	59.0	5.4	5	0.4
Receiver187	187	1	0.0	65.0	66	65.0	10	----	59.5	5.5	5	0.5
Receiver188	188	1	0.0	63.9	66	63.9	10	----	58.9	5.0	5	0.0
Receiver189	189	1	0.0	64.2	66	64.2	10	----	58.2	6.0	5	1.0
Receiver190	190	1	0.0	68.7	66	68.7	10	Snd Lvl	57.9	10.8	5	5.8
Receiver191	191	1	0.0	68.1	66	68.1	10	Snd Lvl	56.8	11.3	5	6.3
Receiver192	192	1	0.0	64.3	66	64.3	10	----	58.0	6.3	5	1.3
Receiver193	193	1	0.0	64.7	66	64.7	10	----	57.4	7.3	5	2.3
Receiver194	194	1	0.0	64.9	66	64.9	10	----	57.1	7.8	5	2.8
Receiver195	195	1	0.0	64.1	66	64.1	10	----	57.5	6.6	5	1.6
Receiver196	196	1	0.0	63.4	66	63.4	10	----	57.7	5.7	5	0.7
Receiver197	197	1	0.0	62.3	66	62.3	10	----	57.8	4.5	5	-0.5
Receiver198	198	1	0.0	61.6	66	61.6	10	----	57.7	3.9	5	-1.1
Receiver199	199	1	0.0	71.6	66	71.6	10	Snd Lvl	60.0	11.6	5	6.6
Receiver200	200	1	0.0	72.4	66	72.4	10	Snd Lvl	60.8	11.6	5	6.6
Receiver201	201	1	0.0	69.3	66	69.3	10	Snd Lvl	59.3	10.0	5	5.0
Receiver202	202	1	0.0	64.2	66	64.2	10	----	58.1	6.1	5	1.1
Receiver203	203	1	0.0	65.4	66	65.4	10	----	58.5	6.9	5	1.9
Receiver204	204	1	0.0	64.1	66	64.1	10	----	57.7	6.4	5	1.4
Receiver205	205	1	0.0	64.8	66	64.8	10	----	57.2	7.6	5	2.6
Receiver206	206	1	0.0	61.1	66	61.1	10	----	56.6	4.5	5	-0.5
Receiver207	207	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver208	208	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver209	209	1	0.0	67.1	66	67.1	10	Snd Lvl	59.1	8.0	5	3.0
Receiver210	210	1	0.0	66.6	66	66.6	10	Snd Lvl	58.5	8.1	5	3.1
Receiver211	211	1	0.0	65.8	66	65.8	10	----	58.5	7.3	5	2.3
Receiver212	212	1	0.0	64.3	66	64.3	10	----	57.7	6.6	5	1.6
Receiver213	213	1	0.0	63.3	66	63.3	10	----	57.1	6.2	5	1.2
Receiver214	214	1	0.0	62.5	66	62.5	10	----	56.7	5.8	5	0.8
Receiver215	215	1	0.0	61.9	66	61.9	10	----	56.3	5.6	5	0.6
Receiver216	216	1	0.0	61.1	66	61.1	10	----	56.1	5.0	5	0.0

RESULTS: SOUND LEVELS **I-75 Noise**

Receiver217	217	1	0.0	0.0	66	0.0	10	invalid	0.0	0.0	5	0.0
Receiver218	218	1	0.0	60.6	66	60.6	10	---	57.7	2.9	5	-2.1
Receiver242	242	1	0.0	77.0	51	77.0	10	Snd Lvl	70.9	6.1	5	1.1
Receiver244	244	1	0.0	64.3	66	64.3	10	----	61.5	2.8	5	-2.2

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	109	0.0	4.7	14.4
All Impacted	52	0.6	6.0	14.4
All that meet NR Goal	55	5.0	7.4	14.4

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg5a - 11 mile to Gardenia - Walls
BARRIER DESIGN: NB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver8	8	1	0.0	68.9	66	68.9	10	Snd Lvl	65.6	3.3	5	-1.7
Receiver9	9	1	0.0	66.0	66	66.0	10	Snd Lvl	63.9	2.1	5	-2.9
Receiver10	10	1	0.0	64.8	66	64.8	10	----	62.6	2.2	5	-2.8
Receiver11	11	1	0.0	63.4	66	63.4	10	----	61.0	2.4	5	-2.6
Receiver12	12	1	0.0	71.8	66	71.8	10	Snd Lvl	69.6	2.2	5	-2.8
Receiver13	13	1	0.0	67.7	66	67.7	10	Snd Lvl	64.6	3.1	5	-1.9
Receiver14	14	1	0.0	66.4	66	66.4	10	Snd Lvl	63.2	3.2	5	-1.8
Receiver15	15	1	0.0	64.9	66	64.9	10	----	61.9	3.0	5	-2.0
Receiver16	16	1	0.0	64.1	66	64.1	10	----	61.0	3.1	5	-1.9
Receiver17	17	1	0.0	72.7	66	72.7	10	Snd Lvl	67.9	4.8	5	-0.2
Receiver18	18	1	0.0	64.2	66	64.2	10	----	60.3	3.9	5	-1.1
Receiver19	19	1	0.0	64.9	66	64.9	10	----	61.0	3.9	5	-1.1
Receiver20	20	1	0.0	65.8	66	65.8	10	----	61.8	4.0	5	-1.0
Receiver21	21	1	0.0	67.0	66	67.0	10	Snd Lvl	62.7	4.3	5	-0.7
Receiver22	22	1	0.0	68.3	66	68.3	10	Snd Lvl	63.8	4.5	5	-0.5
Receiver23	23	1	0.0	69.1	66	69.1	10	Snd Lvl	64.6	4.5	5	-0.5
Receiver24	24	1	0.0	70.3	66	70.3	10	Snd Lvl	65.3	5.0	5	0.0
Receiver25	25	1	0.0	72.9	66	72.9	10	Snd Lvl	68.9	4.0	5	-1.0
Receiver26	26	1	0.0	70.2	66	70.2	10	Snd Lvl	65.9	4.3	5	-0.7
Receiver27	27	1	0.0	68.5	66	68.5	10	Snd Lvl	64.1	4.4	5	-0.6
Receiver28	28	1	0.0	67.3	66	67.3	10	Snd Lvl	63.1	4.2	5	-0.8
Receiver29	29	1	0.0	66.3	66	66.3	10	Snd Lvl	62.2	4.1	5	-0.9
Receiver30	30	1	0.0	65.7	66	65.7	10	----	61.5	4.2	5	-0.8

Receiver31	31	1	0.0	64.9	66	64.9	10	----	60.6	4.3	5	-0.7
Receiver32	32	1	0.0	64.4	66	64.4	10	----	60.1	4.3	5	-0.7
Receiver33	33	1	0.0	76.7	66	76.7	10	Snd Lvl	70.7	6.0	5	1.0
Receiver34	34	1	0.0	73.1	66	73.1	10	Snd Lvl	65.5	7.6	5	2.6
Receiver35	35	1	0.0	70.6	66	70.6	10	Snd Lvl	63.4	7.2	5	2.2
Receiver36	36	1	0.0	68.9	66	68.9	10	Snd Lvl	62.5	6.4	5	1.4
Receiver37	37	1	0.0	67.9	66	67.9	10	Snd Lvl	62.1	5.8	5	0.8
Receiver38	38	1	0.0	67.3	66	67.3	10	Snd Lvl	61.7	5.6	5	0.6
Receiver39	39	1	0.0	66.6	66	66.6	10	Snd Lvl	61.2	5.4	5	0.4
Receiver40	40	1	0.0	65.7	66	65.7	10	----	60.6	5.1	5	0.1
Receiver42	42	1	0.0	75.1	66	75.1	10	Snd Lvl	69.1	6.0	5	1.0
Receiver43	43	1	0.0	72.1	66	72.1	10	Snd Lvl	65.4	6.7	5	1.7
Receiver44	44	1	0.0	70.3	66	70.3	10	Snd Lvl	63.7	6.6	5	1.6
Receiver45	45	1	0.0	69.3	66	69.3	10	Snd Lvl	62.7	6.6	5	1.6
Receiver46	46	1	0.0	68.8	66	68.8	10	Snd Lvl	62.2	6.6	5	1.6
Receiver47	47	1	0.0	67.8	66	67.8	10	Snd Lvl	61.5	6.3	5	1.3
Receiver48	48	1	0.0	67.2	66	67.2	10	Snd Lvl	61.5	5.7	5	0.7
Receiver49	49	1	0.0	66.5	66	66.5	10	Snd Lvl	61.6	4.9	5	-0.1
Receiver50	50	1	0.0	75.8	66	75.8	10	Snd Lvl	72.0	3.8	5	-1.2
Receiver51	51	1	0.0	71.1	66	71.1	10	Snd Lvl	67.5	3.6	5	-1.4
Receiver52	52	1	0.0	70.5	66	70.5	10	Snd Lvl	66.2	4.3	5	-0.7
Receiver53	53	1	0.0	69.5	66	69.5	10	Snd Lvl	65.4	4.1	5	-0.9
Receiver54	54	1	0.0	68.8	66	68.8	10	Snd Lvl	64.8	4.0	5	-1.0
Receiver55	55	1	0.0	68.1	66	68.1	10	Snd Lvl	64.2	3.9	5	-1.1
Receiver56	56	1	0.0	67.3	66	67.3	10	Snd Lvl	63.7	3.6	5	-1.4
Receiver57	57	1	0.0	77.1	66	77.1	10	Snd Lvl	73.6	3.5	5	-1.5
Receiver58	58	1	0.0	73.7	66	73.7	10	Snd Lvl	67.1	6.6	5	1.6
Receiver59	59	1	0.0	71.7	66	71.7	10	Snd Lvl	66.3	5.4	5	0.4
Receiver60	60	1	0.0	70.6	66	70.6	10	Snd Lvl	66.8	3.8	5	-1.2
Receiver61	61	1	0.0	69.7	66	69.7	10	Snd Lvl	66.2	3.5	5	-1.5
Receiver62	62	1	0.0	69.0	66	69.0	10	Snd Lvl	66.0	3.0	5	-2.0
Receiver63	63	1	0.0	68.4	66	68.4	10	Snd Lvl	65.6	2.8	5	-2.2
Receiver64	64	1	0.0	67.8	66	67.8	10	Snd Lvl	65.1	2.7	5	-2.3
Receiver65	65	1	0.0	67.2	66	67.2	10	Snd Lvl	64.6	2.6	5	-2.4

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	57	2.1	4.4	7.6
All Impacted	46	2.1	4.6	7.6
All that meet NR Goal	18	5.0	6.1	7.6

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg5a - 11 mile to Gardenia - Walls
BARRIER DESIGN: NB2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver160	160	4	0.0	79.3	66	79.3	10	Snd Lvl	74.5	4.8	5	-0.2
Receiver161	161	4	0.0	78.0	66	78.0	10	Snd Lvl	71.4	6.6	5	1.6
Receiver162	162	4	0.0	72.8	66	72.8	10	Snd Lvl	64.9	7.9	5	2.9
Receiver163	163	4	0.0	49.0	66	49.0	10	----	48.7	0.3	5	-4.7
Receiver164	164	4	0.0	47.8	66	47.8	10	----	47.7	0.1	5	-4.9
Receiver165	165	4	0.0	49.7	66	49.7	10	----	49.5	0.2	5	-4.8
Receiver166	166	4	0.0	50.1	66	50.1	10	----	49.9	0.2	5	-4.8
Receiver167	167	4	0.0	72.9	66	72.9	10	Snd Lvl	64.7	8.2	5	3.2
Receiver168	168	4	0.0	77.6	66	77.6	10	Snd Lvl	70.1	7.5	5	2.5
Receiver169	169	4	0.0	78.9	66	78.9	10	Snd Lvl	73.1	5.8	5	0.8
Receiver170	170	4	0.0	69.3	66	69.3	10	Snd Lvl	63.2	6.1	5	1.1
Receiver171	171	4	0.0	49.8	66	49.8	10	----	49.4	0.4	5	-4.6
Receiver172	172	4	0.0	49.1	66	49.1	10	----	48.3	0.8	5	-4.2
Receiver173	173	4	0.0	47.9	66	47.9	10	----	47.5	0.4	5	-4.6
Receiver174	174	4	0.0	49.1	66	49.1	10	----	48.1	1.0	5	-4.0
Receiver191	191	4	0.0	63.0	66	63.0	10	----	62.6	0.4	5	-4.6
Receiver192	192	4	0.0	62.9	66	62.9	10	----	62.1	0.8	5	-4.2
Receiver193	193	4	0.0	61.9	66	61.9	10	----	58.0	3.9	5	-1.1
Receiver194	194	4	0.0	62.2	66	62.2	10	----	56.9	5.3	5	0.3
Receiver195	195	4	0.0	63.5	66	63.5	10	----	56.5	7.0	5	2.0
Receiver196	196	4	0.0	62.8	66	62.8	10	----	56.2	6.6	5	1.6
Receiver197	197	4	0.0	61.6	66	61.6	10	----	55.8	5.8	5	0.8
Receiver198	198	4	0.0	61.5	66	61.5	10	----	55.9	5.6	5	0.6

Receiver200	200	1	0.0	62.8	66	62.8	10	----	60.9	1.9	5	-3.1
Receiver201	201	1	0.0	71.7	66	71.7	10	Snd Lvl	68.1	3.6	5	-1.4
Receiver202	202	1	0.0	69.5	66	69.5	10	Snd Lvl	64.5	5.0	5	0.0
Receiver203	203	1	0.0	67.6	66	67.6	10	Snd Lvl	63.6	4.0	5	-1.0
Receiver204	204	1	0.0	65.3	66	65.3	10	----	61.9	3.4	5	-1.6
Receiver205	205	1	0.0	68.6	66	68.6	10	Snd Lvl	65.5	3.1	5	-1.9
Receiver206	206	1	0.0	66.3	66	66.3	10	Snd Lvl	63.9	2.4	5	-2.6
Receiver207	207	1	0.0	65.8	66	65.8	10	----	63.3	2.5	5	-2.5
Receiver74	74	1	0.0	65.9	66	65.9	10	----	59.3	6.6	5	1.6
Receiver210	210	1	0.0	66.5	66	66.5	10	Snd Lvl	59.9	6.6	5	1.6
Receiver211	211	1	0.0	64.8	66	64.8	10	----	58.8	6.0	5	1.0
Receiver212	212	1	0.0	64.0	66	64.0	10	----	58.4	5.6	5	0.6
Receiver213	213	1	0.0	65.3	66	65.3	10	----	59.1	6.2	5	1.2
Receiver214	214	1	0.0	63.2	66	63.2	10	----	58.1	5.1	5	0.1
Receiver215	215	1	0.0	60.7	66	60.7	10	----	56.2	4.5	5	-0.5
Receiver216	216	1	0.0	58.0	66	58.0	10	----	54.8	3.2	5	-1.8
Receiver217	217	1	0.0	56.4	66	56.4	10	----	54.2	2.2	5	-2.8
Receiver218	218	1	0.0	57.2	66	57.2	10	----	54.9	2.3	5	-2.7
Receiver219	219	1	0.0	57.2	66	57.2	10	----	55.4	1.8	5	-3.2

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	111	0.1	3.9	8.2
All Impacted	34	2.4	5.5	8.2
All that meet NR Goal	51	5.0	6.3	8.2

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg5a - 11 mile to Gardenia - Walls
BARRIER DESIGN: SB1

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

ATMOSPHERICS: 68 deg F, 50% RH

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver259	259	1	0.0	77.7	66	77.7	10	Snd Lvl	76.0	1.7	5	-3.3
Receiver260	260	1	0.0	78.0	66	78.0	10	Snd Lvl	75.6	2.4	5	-2.6
Receiver261	261	1	0.0	77.7	66	77.7	10	Snd Lvl	74.2	3.5	5	-1.5
Receiver262	262	1	0.0	77.6	66	77.6	10	Snd Lvl	73.1	4.5	5	-0.5
Receiver263	263	1	0.0	77.2	66	77.2	10	Snd Lvl	72.1	5.1	5	0.1
Receiver264	264	1	0.0	76.7	66	76.7	10	Snd Lvl	70.5	6.2	5	1.2
Receiver265	265	1	0.0	75.9	66	75.9	10	Snd Lvl	69.6	6.3	5	1.3
Receiver266	266	1	0.0	75.1	66	75.1	10	Snd Lvl	69.0	6.1	5	1.1
Receiver267	267	1	0.0	74.3	66	74.3	10	Snd Lvl	68.6	5.7	5	0.7
Receiver268	268	1	0.0	74.1	66	74.1	10	Snd Lvl	68.6	5.5	5	0.5
Receiver269	269	1	0.0	74.1	66	74.1	10	Snd Lvl	68.8	5.3	5	0.3
Receiver270	270	1	0.0	74.0	66	74.0	10	Snd Lvl	69.0	5.0	5	0.0
Receiver271	271	1	0.0	73.0	66	73.0	10	Snd Lvl	68.9	4.1	5	-0.9
Receiver309	309	1	0.0	67.8	66	67.8	10	Snd Lvl	66.7	1.1	5	-3.9
Receiver311	311	1	0.0	65.8	66	65.8	10	-----	59.9	5.9	5	0.9
Receiver312	312	1	0.0	66.4	66	66.4	10	Snd Lvl	63.1	3.3	5	-1.7
Receiver313	313	1	0.0	67.2	66	67.2	10	Snd Lvl	66.1	1.1	5	-3.9
Receiver314	314	1	0.0	67.9	66	67.9	10	Snd Lvl	60.4	7.5	5	2.5
Receiver316	316	1	0.0	66.0	66	66.0	10	Snd Lvl	61.2	4.8	5	-0.2
Receiver317	317	1	0.0	66.2	66	66.2	10	Snd Lvl	59.9	6.3	5	1.3
Receiver318	318	1	0.0	65.6	66	65.6	10	----	59.5	6.1	5	1.1
Receiver319	319	1	0.0	64.2	66	64.2	10	----	61.2	3.0	5	-2.0
Receiver321	321	1	0.0	64.0	66	64.0	10	----	60.6	3.4	5	-1.6

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	23	1.1	4.5	7.5
All Impacted	19	1.1	4.5	7.5
All that meet NR Goal	12	5.0	5.9	7.5

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg6 - Gardenia to 12 Mile - Walls
BARRIER DESIGN: NB1a
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver6	6	1	0.0	72.9	66	72.9	10	Snd Lvl	72.9	0.0	5	-5.0
Receiver7	7	1	0.0	73.4	66	73.4	10	Snd Lvl	73.4	0.0	5	-5.0
Receiver8	8	1	0.0	68.0	66	68.0	10	Snd Lvl	67.3	0.7	5	-4.3
Receiver9	9	1	0.0	68.7	66	68.7	10	Snd Lvl	65.2	3.5	5	-1.5
Receiver10	10	1	0.0	62.8	66	62.8	10	----	61.8	1.0	5	-4.0
Receiver11	11	1	0.0	62.0	66	62.0	10	----	61.5	0.5	5	-4.5
Receiver12	12	1	0.0	61.0	66	61.0	10	----	57.9	3.1	5	-1.9
Receiver13	13	1	0.0	62.2	66	62.2	10	----	57.2	5.0	5	0.0
Receiver14	14	1	0.0	66.1	66	66.1	10	Snd Lvl	57.4	8.7	5	3.7
Receiver15	15	1	0.0	66.1	66	66.1	10	Snd Lvl	56.0	10.1	5	5.1
Receiver16	16	1	0.0	59.6	66	59.6	10	----	58.9	0.7	5	-4.3
Receiver17	17	1	0.0	58.5	66	58.5	10	----	56.6	1.9	5	-3.1
Receiver18	18	1	0.0	58.9	66	58.9	10	----	56.2	2.7	5	-2.3
Receiver19	19	1	0.0	59.8	66	59.8	10	----	56.7	3.1	5	-1.9
Receiver20	20	1	0.0	60.4	66	60.4	10	----	56.8	3.6	5	-1.4
Receiver21	21	1	0.0	58.0	66	58.0	10	----	55.4	2.6	5	-2.4
Receiver22	22	1	0.0	64.9	66	64.9	10	----	57.8	7.1	5	2.1

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	17	0.0	3.2	10.1
All Impacted	6	0.0	3.8	10.1
All that meet NR Goal	4	5.0	7.7	10.1

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg6 - Gardenia to 12 Mile - Walls
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver23	23	1	0.0	76.4	66	76.4	10	Snd Lvl	65.9	10.5	5	5.5
Receiver24	24	1	0.0	69.9	66	69.9	10	Snd Lvl	61.4	8.5	5	3.5
Receiver25	25	1	0.0	65.2	66	65.2	10	----	59.7	5.5	5	0.5
Receiver26	26	1	0.0	73.4	66	73.4	10	Snd Lvl	62.9	10.5	5	5.5
Receiver27	27	1	0.0	69.7	66	69.7	10	Snd Lvl	60.0	9.7	5	4.7
Receiver28	28	1	0.0	72.4	66	72.4	10	Snd Lvl	62.1	10.3	5	5.3
Receiver29	29	1	0.0	65.4	66	65.4	10	----	60.2	5.2	5	0.2
Receiver30	30	1	0.0	71.3	66	71.3	10	Snd Lvl	62.7	8.6	5	3.6
Receiver31	31	1	0.0	70.3	66	70.3	10	Snd Lvl	62.0	8.3	5	3.3
Receiver32	32	1	0.0	64.0	66	64.0	10	----	59.0	5.0	5	0.0
Receiver33	33	1	0.0	70.3	66	70.3	10	Snd Lvl	59.8	10.5	5	5.5
Receiver34	34	1	0.0	68.3	66	68.3	10	Snd Lvl	60.2	8.1	5	3.1
Receiver61	61	1	0.0	63.6	66	63.6	10	----	58.1	5.5	5	0.5
Receiver62	62	1	0.0	61.4	66	61.4	10	----	57.8	3.6	5	-1.4
Receiver63	63	1	0.0	66.8	66	66.8	10	Snd Lvl	61.5	5.3	5	0.3
Receiver64	64	1	0.0	62.6	66	62.6	10	----	58.4	4.2	5	-0.8
Receiver65	65	1	0.0	60.6	66	60.6	10	----	56.9	3.7	5	-1.3
Receiver66	66	1	0.0	60.8	66	60.8	10	----	58.0	2.8	5	-2.2
Receiver67	67	1	0.0	64.5	66	64.5	10	----	64.5	0.0	5	-5.0
Receiver68	68	1	0.0	64.8	66	64.8	10	----	64.8	0.0	5	-5.0
Receiver69	69	1	0.0	63.7	66	63.7	10	----	63.7	0.0	5	-5.0
Receiver70	70	1	0.0	62.1	66	62.1	10	----	62.2	-0.1	5	-5.1
Receiver71	71	1	0.0	59.4	66	59.4	10	----	59.0	0.4	5	-4.6

Receiver72	72	1	0.0	60.1	66	60.1	10	----	59.4	0.7	5	-4.3
Receiver73	73	1	0.0	63.6	66	63.6	10	----	63.2	0.4	5	-4.6

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	25	-0.1	5.1	10.5
All Impacted	10	5.3	9.0	10.5
All that meet NR Goal	14	5.0	8.0	10.5

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg6 - Gardenia to 12 Mile - Walls
BARRIER DESIGN: SB2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver39	39	12	0.0	71.9	66	71.9	10	Snd Lvl	66.5	5.4	5	0.4
Receiver40	40	2	0.0	71.5	66	71.5	10	Snd Lvl	67.0	4.5	5	-0.5
Receiver55	55	2	0.0	71.7	66	71.7	10	Snd Lvl	66.5	5.2	5	0.2
Receiver56	56	2	0.0	69.8	66	69.8	10	Snd Lvl	64.7	5.1	5	0.1
Receiver57	57	2	0.0	71.4	66	71.4	10	Snd Lvl	67.8	3.6	5	-1.4
Receiver58	58	2	0.0	69.8	66	69.8	10	Snd Lvl	67.4	2.4	5	-2.6
Receiver59	59	2	0.0	72.6	66	72.6	10	Snd Lvl	71.5	1.1	5	-3.9

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	24	1.1	3.9	5.4
All Impacted	24	1.1	3.9	5.4
All that meet NR Goal	16	5.1	5.2	5.4

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg7 - 12 Mile to 14 Mile - Walls
BARRIER DESIGN: NB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver20	20	8	0.0	73.2	66	73.2	10	Snd Lvl	65.2	8.0	5	3.0
Receiver2	2	4	0.0	73.3	66	73.3	10	Snd Lvl	66.5	6.8	5	1.8
Receiver3	3	8	0.0	73.6	66	73.6	10	Snd Lvl	67.3	6.3	5	1.3
Receiver4	4	4	0.0	74.6	66	74.6	10	Snd Lvl	67.1	7.5	5	2.5
Receiver5	5	4	0.0	74.4	66	74.4	10	Snd Lvl	66.0	8.4	5	3.4
Receiver6	6	4	0.0	76.0	66	76.0	10	Snd Lvl	66.7	9.3	5	4.3
Receiver7	7	4	0.0	76.7	66	76.7	10	Snd Lvl	66.5	10.2	5	5.2
Receiver8	8	4	0.0	77.5	66	77.5	10	Snd Lvl	66.4	11.1	5	6.1
Receiver9	9	4	0.0	77.7	66	77.7	10	Snd Lvl	66.3	11.4	5	6.4
Receiver10	10	4	0.0	77.5	66	77.5	10	Snd Lvl	66.4	11.1	5	6.1
Receiver11	11	4	0.0	77.0	66	77.0	10	Snd Lvl	66.3	10.7	5	5.7
Receiver12	12	4	0.0	77.4	66	77.4	10	Snd Lvl	66.3	11.1	5	6.1
Receiver13	13	4	0.0	77.4	66	77.4	10	Snd Lvl	66.2	11.2	5	6.2
Receiver14	14	4	0.0	78.4	66	78.4	10	Snd Lvl	66.2	12.2	5	7.2
Receiver15	15	4	0.0	78.2	66	78.2	10	Snd Lvl	66.4	11.8	5	6.8
Receiver16	16	4	0.0	78.2	66	78.2	10	Snd Lvl	66.5	11.7	5	6.7
Receiver17	17	4	0.0	76.8	66	76.8	10	Snd Lvl	66.3	10.5	5	5.5
Receiver18	18	4	0.0	76.0	66	76.0	10	Snd Lvl	65.5	10.5	5	5.5
Receiver19	19	4	0.0	76.7	66	76.7	10	Snd Lvl	64.0	12.7	5	7.7
Receiver22	22	4	0.0	72.5	66	72.5	10	Snd Lvl	64.8	7.7	5	2.7
Receiver37	36	4	0.0	73.0	66	73.0	10	Snd Lvl	66.3	6.7	5	1.7
Receiver39	37	4	0.0	72.0	66	72.0	10	Snd Lvl	66.9	5.1	5	0.1
Receiver41	38	8	0.0	72.6	66	72.6	10	Snd Lvl	64.6	8.0	5	3.0

Receiver43	39	4	0.0	71.2	66	71.2	10	Snd Lvl	63.4	7.8	5	2.8
Receiver45	40	4	0.0	72.4	66	72.4	10	Snd Lvl	65.5	6.9	5	1.9
Receiver47	41	4	0.0	76.2	66	76.2	10	Snd Lvl	65.4	10.8	5	5.8
Receiver49	42	4	0.0	76.4	66	76.4	10	Snd Lvl	65.4	11.0	5	6.0
Receiver51	43	4	0.0	75.7	66	75.7	10	Snd Lvl	64.6	11.1	5	6.1
Receiver53	44	4	0.0	74.8	66	74.8	10	Snd Lvl	64.2	10.6	5	5.6
Receiver55	45	4	0.0	74.1	66	74.1	10	Snd Lvl	63.8	10.3	5	5.3
Receiver57	46	4	0.0	74.5	66	74.5	10	Snd Lvl	64.1	10.4	5	5.4
Receiver59	47	4	0.0	73.4	66	73.4	10	Snd Lvl	63.5	9.9	5	4.9
Receiver61	48	4	0.0	73.4	66	73.4	10	Snd Lvl	63.5	9.9	5	4.9
Receiver63	49	4	0.0	73.6	66	73.6	10	Snd Lvl	70.3	3.3	5	-1.7

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	148	3.3	9.5	12.7
All Impacted	148	3.3	9.5	12.7
All that meet NR Goal	144	5.1	9.7	12.7

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg8 - 14 Mile to Rochester Rd - Walls
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	76.7	66	76.7	10	Snd Lvl	63.2	13.5	5	8.5
Receiver2	2	1	0.0	76.2	66	76.2	10	Snd Lvl	63.4	12.8	5	7.8
Receiver3	3	1	0.0	75.9	66	75.9	10	Snd Lvl	63.5	12.4	5	7.4
Receiver4	4	1	0.0	76.1	66	76.1	10	Snd Lvl	63.6	12.5	5	7.5
Receiver5	5	1	0.0	75.7	66	75.7	10	Snd Lvl	63.2	12.5	5	7.5
Receiver6	8	1	0.0	75.6	66	75.6	10	Snd Lvl	63.1	12.5	5	7.5
Receiver7	9	2	0.0	75.9	66	75.9	10	Snd Lvl	63.3	12.6	5	7.6
Receiver8	10	1	0.0	75.9	66	75.9	10	Snd Lvl	63.2	12.7	5	7.7
Receiver9	11	1	0.0	75.9	66	75.9	10	Snd Lvl	63.2	12.7	5	7.7
Receiver10	12	1	0.0	75.8	66	75.8	10	Snd Lvl	63.1	12.7	5	7.7
Receiver11	15	1	0.0	75.6	66	75.6	10	Snd Lvl	63.0	12.6	5	7.6
Receiver12	16	1	0.0	75.4	66	75.4	10	Snd Lvl	62.9	12.5	5	7.5
Second Row	17	11	0.0	64.3	66	64.3	10	----	56.5	7.8	5	2.8
Receiver14	18	1	0.0	74.9	66	74.9	10	Snd Lvl	62.7	12.2	5	7.2
Receiver15	19	2	0.0	75.8	66	75.8	10	Snd Lvl	62.9	12.9	5	7.9
Receiver17	21	1	0.0	75.2	66	75.2	10	Snd Lvl	62.5	12.7	5	7.7

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	28	7.8	12.3	13.5
All Impacted	17	12.2	12.7	13.5
All that meet NR Goal	28	7.8	12.3	13.5

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg9 - Rochester to Livernois - Walls
BARRIER DESIGN: NB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver13	13	1	0.0	73.9	66	73.9	10	Snd Lvl	66.7	7.2	5	2.2
Receiver15	15	3	0.0	66.7	66	66.7	10	Snd Lvl	56.1	10.6	5	5.6
Receiver16	16	2	0.0	73.7	66	73.7	10	Snd Lvl	66.0	7.7	5	2.7
Receiver18	18	2	0.0	74.8	66	74.8	10	Snd Lvl	66.7	8.1	5	3.1
Receiver19	19	3	0.0	69.9	66	69.9	10	Snd Lvl	61.5	8.4	5	3.4
Receiver20	20	2	0.0	75.2	66	75.2	10	Snd Lvl	67.3	7.9	5	2.9
Receiver22	22	2	0.0	76.0	66	76.0	10	Snd Lvl	66.7	9.3	5	4.3
Receiver23	23	3	0.0	71.8	66	71.8	10	Snd Lvl	63.6	8.2	5	3.2
Receiver24	24	2	0.0	76.9	66	76.9	10	Snd Lvl	67.4	9.5	5	4.5
Receiver26	26	2	0.0	77.6	66	77.6	10	Snd Lvl	68.6	9.0	5	4.0
Receiver27	27	3	0.0	72.0	66	72.0	10	Snd Lvl	64.4	7.6	5	2.6
Receiver28	28	2	0.0	77.8	66	77.8	10	Snd Lvl	68.3	9.5	5	4.5
Receiver30	30	3	0.0	76.7	66	76.7	10	Snd Lvl	67.8	8.9	5	3.9
Receiver31	31	3	0.0	76.8	66	76.8	10	Snd Lvl	68.0	8.8	5	3.8
Receiver33	33	3	0.0	76.7	66	76.7	10	Snd Lvl	68.9	7.8	5	2.8
Receiver34	34	3	0.0	76.7	66	76.7	10	Snd Lvl	68.2	8.5	5	3.5
Receiver76	76	6	0.0	76.4	66	76.4	10	Snd Lvl	69.0	7.4	5	2.4

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	45	7.2	8.5	10.6
All Impacted	45	7.2	8.5	10.6
All that meet NR Goal	45	7.2	8.5	10.6

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg9 - Rochester to Livernois - Walls
BARRIER DESIGN: SB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver37	37	2	0.0	71.9	66	71.9	10	Snd Lvl	65.6	6.3	5	1.3
Receiver38	38	2	0.0	73.5	66	73.5	10	Snd Lvl	66.5	7.0	5	2.0
Receiver39	39	6	0.0	68.5	66	68.5	10	Snd Lvl	61.1	7.4	5	2.4
Receiver40	40	6	0.0	70.0	66	70.0	10	Snd Lvl	60.1	9.9	5	4.9
Receiver42	42	4	0.0	73.0	66	73.0	10	Snd Lvl	66.0	7.0	5	2.0
Receiver43	43	4	0.0	75.0	66	75.0	10	Snd Lvl	67.7	7.3	5	2.3
Receiver44	44	2	0.0	69.9	66	69.9	10	Snd Lvl	62.6	7.3	5	2.3
Receiver45	45	2	0.0	70.9	66	70.9	10	Snd Lvl	61.7	9.2	5	4.2
Receiver46	46	2	0.0	69.5	66	69.5	10	Snd Lvl	63.4	6.1	5	1.1
Receiver47	47	2	0.0	70.7	66	70.7	10	Snd Lvl	63.4	7.3	5	2.3
Receiver49	49	6	0.0	73.2	66	73.2	10	Snd Lvl	64.6	8.6	5	3.6
Receiver50	50	6	0.0	75.5	66	75.5	10	Snd Lvl	67.9	7.6	5	2.6
Receiver51	51	2	0.0	74.1	66	74.1	10	Snd Lvl	65.5	8.6	5	3.6
Receiver52	52	2	0.0	76.0	66	76.0	10	Snd Lvl	68.8	7.2	5	2.2
Receiver54	54	2	0.0	71.5	66	71.5	10	Snd Lvl	62.7	8.8	5	3.8
Receiver55	55	2	0.0	71.7	66	71.7	10	Snd Lvl	63.9	7.8	5	2.8
Receiver56	56	6	0.0	69.3	66	69.3	10	Snd Lvl	61.5	7.8	5	2.8
Receiver57	57	6	0.0	70.4	66	70.4	10	Snd Lvl	62.6	7.8	5	2.8
Receiver58	58	2	0.0	71.0	66	71.0	10	Snd Lvl	62.7	8.3	5	3.3
Receiver59	59	2	0.0	72.2	66	72.2	10	Snd Lvl	64.4	7.8	5	2.8
Receiver60	60	2	0.0	74.3	66	74.3	10	Snd Lvl	65.3	9.0	5	4.0
Receiver61	61	2	0.0	75.9	66	75.9	10	Snd Lvl	68.2	7.7	5	2.7
Receiver63	63	6	0.0	74.3	66	74.3	10	Snd Lvl	64.9	9.4	5	4.4

Receiver64	64	6	0.0	75.9	66	75.9	10	Snd Lvl	68.5	7.4	5	2.4
Receiver65	65	3	0.0	74.7	66	74.7	10	Snd Lvl	65.4	9.3	5	4.3
Receiver66	66	3	0.0	75.7	66	75.7	10	Snd Lvl	68.6	7.1	5	2.1
Receiver68	68	6	0.0	75.9	66	75.9	10	Snd Lvl	64.9	11.0	5	6.0
Receiver69	69	6	0.0	76.4	66	76.4	10	Snd Lvl	68.6	7.8	5	2.8
Receiver70	70	2	0.0	75.7	66	75.7	10	Snd Lvl	64.9	10.8	5	5.8
Receiver71	71	2	0.0	75.6	66	75.6	10	Snd Lvl	67.5	8.1	5	3.1
Receiver73	73	6	0.0	74.4	66	74.4	10	Snd Lvl	64.4	10.0	5	5.0
Receiver74	74	6	0.0	76.1	66	76.1	10	Snd Lvl	67.3	8.8	5	3.8
Receiver76	76	1	0.0	74.6	66	74.6	10	Snd Lvl	64.6	10.0	5	5.0
Receiver77	77	6	0.0	74.7	66	74.7	10	Snd Lvl	68.5	6.2	5	1.2
Receiver80	80	6	0.0	71.4	66	71.4	10	Snd Lvl	62.8	8.6	5	3.6
Receiver82	82	6	0.0	72.0	66	72.0	10	Snd Lvl	68.4	3.6	5	-1.4
Receiver84	84	2	0.0	69.6	66	69.6	10	Snd Lvl	60.9	8.7	5	3.7
Receiver85	85	2	0.0	70.3	66	70.3	10	Snd Lvl	64.2	6.1	5	1.1
Receiver87	87	6	0.0	62.4	66	62.4	10	----	61.1	1.3	5	-3.7
Receiver88	88	6	0.0	64.3	66	64.3	10	----	63.1	1.2	5	-3.8

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	153	1.2	7.7	11.0
All Impacted	141	3.6	8.0	11.0
All that meet NR Goal	135	6.1	8.1	11.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg10 - Livernois to Wattles - Walls
BARRIER DESIGN: SB1
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	79.7	66	79.7	10	Snd Lvl	75.3	4.4	5	-0.6
Receiver2	2	5	0.0	75.5	66	75.5	10	Snd Lvl	65.1	10.4	5	5.4
Receiver3	3	4	0.0	75.9	66	75.9	10	Snd Lvl	66.2	9.7	5	4.7
Receiver4	4	5	0.0	65.3	66	65.3	10	-----	58.8	6.5	5	1.5
Receiver5	5	4	0.0	73.8	66	73.8	10	Snd Lvl	66.3	7.5	5	2.5
Receiver6	6	7	0.0	77.2	66	77.2	10	Snd Lvl	66.6	10.6	5	5.6
Receiver7	7	6	0.0	77.6	66	77.6	10	Snd Lvl	67.7	9.9	5	4.9
Receiver8	8	3	0.0	68.1	66	68.1	10	Snd Lvl	61.1	7.0	5	2.0
Receiver9	9	4	0.0	80.1	66	80.1	10	Snd Lvl	70.9	9.2	5	4.2
Receiver10	10	4	0.0	82.9	66	82.9	10	Snd Lvl	73.2	9.7	5	4.7
Receiver12	12	4	0.0	82.5	66	82.5	10	Snd Lvl	69.0	13.5	5	8.5
Receiver13	13	4	0.0	76.8	66	76.8	10	Snd Lvl	66.5	10.3	5	5.3
Receiver14	14	4	0.0	68.2	66	68.2	10	Snd Lvl	63.0	5.2	5	0.2
Receiver15	15	3	0.0	82.5	66	82.5	10	Snd Lvl	68.0	14.5	5	9.5
Receiver16	16	5	0.0	77.5	66	77.5	10	Snd Lvl	61.7	15.8	5	10.8
Receiver17	17	5	0.0	75.3	66	75.3	10	Snd Lvl	64.6	10.7	5	5.7
Receiver18	18	4	0.0	77.2	66	77.2	10	Snd Lvl	66.0	11.2	5	6.2
Receiver19	19	7	0.0	82.2	66	82.2	10	Snd Lvl	71.4	10.8	5	5.8
Receiver20	20	2	0.0	76.0	66	76.0	10	Snd Lvl	68.7	7.3	5	2.3

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB
All Selected	81	4.4	9.7	15.8

All Impacted	76	4.4	9.9	15.8
All that meet NR Goal	80	5.2	10.0	15.8

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 11a
BARRIER DESIGN: NB1
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	No Barrier LAeq1h Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver52	52	1	0.0	68.7	66	68.7	10	Snd Lvl	62.5	6.2	5	1.2
Receiver53	53	1	0.0	66.3	66	66.3	10	Snd Lvl	61.2	5.1	5	0.1
Receiver54	54	1	0.0	60.1	66	60.1	10	----	56.9	3.2	5	-1.8
Receiver55	55	1	0.0	64.0	66	64.0	10	----	56.7	7.3	5	2.3
Receiver56	56	1	0.0	66.8	66	66.8	10	Snd Lvl	59.4	7.4	5	2.4
Receiver57	57	1	0.0	70.8	66	70.8	10	Snd Lvl	62.4	8.4	5	3.4
Receiver58	58	1	0.0	68.1	66	68.1	10	Snd Lvl	59.0	9.1	5	4.1
Receiver59	59	1	0.0	63.1	66	63.1	10	----	56.1	7.0	5	2.0
Receiver60	60	1	0.0	60.8	66	60.8	10	----	54.4	6.4	5	1.4
Receiver61	61	1	0.0	71.8	66	71.8	10	Snd Lvl	61.4	10.4	5	5.4
Receiver62	62	1	0.0	66.8	66	66.8	10	Snd Lvl	59.0	7.8	5	2.8
Receiver63	63	1	0.0	63.7	66	63.7	10	----	56.9	6.8	5	1.8
Receiver64	64	1	0.0	71.9	66	71.9	10	Snd Lvl	61.9	10.0	5	5.0
Receiver65	65	1	0.0	66.6	66	66.6	10	Snd Lvl	57.7	8.9	5	3.9
Receiver66	66	1	0.0	63.7	66	63.7	10	----	55.7	8.0	5	3.0
Receiver67	67	1	0.0	70.9	66	70.9	10	Snd Lvl	64.2	6.7	5	1.7
Receiver68	68	1	0.0	66.3	66	66.3	10	Snd Lvl	59.8	6.5	5	1.5
Receiver69	69	1	0.0	62.7	66	62.7	10	----	57.2	5.5	5	0.5

Dwelling Units	# DUs	Noise Reduction Min	Noise Reduction Avg	Noise Reduction Max
		dB	dB	dB
All Selected	18	3.2	7.3	10.4
All Impacted	11	5.1	7.9	10.4

All that meet NR Goal	17	5.1	7.5	10.4

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise
RUN: Segment 11a
BARRIER DESIGN: SB1

ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver2	2	2	0.0	65.7	66	65.7	10	----	63.9	1.8	5	-3.2
Receiver3	3	2	0.0	69.0	66	69.0	10	Snd Lvl	66.9	2.1	5	-2.9
Receiver4	4	2	0.0	66.8	66	66.8	10	Snd Lvl	64.3	2.5	5	-2.5
Receiver5	5	2	0.0	69.9	66	69.9	10	Snd Lvl	67.1	2.8	5	-2.2
Receiver6	6	2	0.0	65.8	66	65.8	10	----	61.8	4.0	5	-1.0
Receiver7	7	2	0.0	68.1	66	68.1	10	Snd Lvl	63.6	4.5	5	-0.5
Receiver8	8	2	0.0	64.2	66	64.2	10	----	59.5	4.7	5	-0.3
Receiver9	9	2	0.0	66.5	66	66.5	10	Snd Lvl	61.0	5.5	5	0.5
Receiver10	10	2	0.0	62.3	66	62.3	10	----	58.7	3.6	5	-1.4
Receiver11	11	2	0.0	65.8	66	65.8	10	----	62.0	3.8	5	-1.2
Receiver12	12	2	0.0	63.9	66	63.9	10	----	59.7	4.2	5	-0.8
Receiver13	13	2	0.0	67.8	66	67.8	10	Snd Lvl	62.8	5.0	5	0.0
Receiver14	14	2	0.0	68.5	66	68.5	10	Snd Lvl	59.3	9.2	5	4.2
Receiver15	15	2	0.0	69.8	66	69.8	10	Snd Lvl	61.4	8.4	5	3.4
Receiver16	16	2	0.0	69.1	66	69.1	10	Snd Lvl	59.2	9.9	5	4.9
Receiver17	17	2	0.0	69.7	66	69.7	10	Snd Lvl	60.9	8.8	5	3.8
Receiver18	18	2	0.0	52.7	66	52.7	10	----	44.5	8.2	5	3.2
Receiver19	19	2	0.0	57.9	66	57.9	10	----	49.2	8.7	5	3.7
Receiver20	20	2	0.0	56.4	66	56.4	10	----	47.0	9.4	5	4.4
Receiver21	21	2	0.0	62.3	66	62.3	10	----	52.0	10.3	5	5.3
Receiver22	22	2	0.0	58.9	66	58.9	10	----	51.2	7.7	5	2.7
Receiver23	23	2	0.0	55.4	66	55.4	10	----	55.3	0.1	5	-4.9
Receiver24	24	2	0.0	46.4	66	46.4	10	----	46.4	0.0	5	-5.0

Receiver25	25	2	0.0	49.4	66	49.4	10	----	49.3	0.1	5	-4.9
Receiver26	26	2	0.0	54.8	66	54.8	10	----	47.7	7.1	5	2.1
Receiver27	27	2	0.0	64.1	66	64.1	10	----	55.0	9.1	5	4.1
Receiver28	28	2	0.0	57.3	66	57.3	10	----	49.4	7.9	5	2.9
Receiver29	29	2	0.0	66.3	66	66.3	10	Snd Lvl	56.1	10.2	5	5.2
Receiver30	30	2	0.0	65.9	66	65.9	10	----	54.5	11.4	5	6.4
Receiver31	31	2	0.0	68.4	66	68.4	10	Snd Lvl	61.6	6.8	5	1.8
Receiver32	32	2	0.0	60.7	66	60.7	10	----	56.4	4.3	5	-0.7
Receiver33	33	2	0.0	66.4	66	66.4	10	Snd Lvl	57.7	8.7	5	3.7
Receiver34	34	2	0.0	60.7	66	60.7	10	----	54.1	6.6	5	1.6
Receiver35	35	2	0.0	67.3	66	67.3	10	Snd Lvl	60.8	6.5	5	1.5
Receiver36	36	2	0.0	64.0	66	64.0	10	----	56.4	7.6	5	2.6
Receiver37	37	2	0.0	68.5	66	68.5	10	Snd Lvl	61.3	7.2	5	2.2
Receiver38	38	2	0.0	59.8	66	59.8	10	----	53.9	5.9	5	0.9
Receiver39	39	2	0.0	64.5	66	64.5	10	----	57.1	7.4	5	2.4
Receiver40	40	2	0.0	55.7	66	55.7	10	----	49.8	5.9	5	0.9
Receiver41	41	2	0.0	58.5	66	58.5	10	----	50.4	8.1	5	3.1
Receiver42	42	2	0.0	49.8	66	49.8	10	----	46.3	3.5	5	-1.5
Receiver43	43	2	0.0	55.3	66	55.3	10	----	49.7	5.6	5	0.6
Receiver44	44	2	0.0	57.8	66	57.8	10	----	51.9	5.9	5	0.9
Receiver45	45	2	0.0	60.9	66	60.9	10	----	54.9	6.0	5	1.0
Receiver47	47	2	0.0	60.5	66	60.5	10	----	58.4	2.1	5	-2.9
Receiver48	48	2	0.0	68.8	66	68.8	10	Snd Lvl	62.3	6.5	5	1.5
Receiver49	49	2	0.0	54.5	66	54.5	10	----	52.2	2.3	5	-2.7
Receiver50	50	2	0.0	68.6	66	68.6	10	Snd Lvl	61.6	7.0	5	2.0

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	96	0.0	5.9	11.4
All Impacted	34	2.1	6.6	10.2
All that meet NR Goal	62	5.0	7.7	11.4

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg 11 - Wattles to Coolidge - Walls
BARRIER DESIGN: NB1-3
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver30	30	1	0.0	67.5	66	67.5	10	Snd Lvl	64.7	2.8	5	-2.2
Receiver31	31	1	0.0	68.9	66	68.9	10	Snd Lvl	65.4	3.5	5	-1.5
Receiver32	32	1	0.0	67.3	66	67.3	10	Snd Lvl	63.1	4.2	5	-0.8
Receiver33	33	1	0.0	63.5	66	63.5	10	----	59.8	3.7	5	-1.3
Receiver34	34	1	0.0	70.0	66	70.0	10	Snd Lvl	65.7	4.3	5	-0.7
Receiver35	35	1	0.0	65.9	66	65.9	10	----	60.7	5.2	5	0.2
Receiver36	36	1	0.0	70.4	66	70.4	10	Snd Lvl	65.4	5.0	5	0.0
Receiver38	38	1	0.0	71.7	66	71.7	10	Snd Lvl	65.6	6.1	5	1.1
Receiver39	39	1	0.0	70.5	66	70.5	10	Snd Lvl	64.1	6.4	5	1.4
Receiver40	40	1	0.0	62.4	66	62.4	10	----	57.4	5.0	5	0.0
Receiver41	41	1	0.0	71.1	66	71.1	10	Snd Lvl	65.2	5.9	5	0.9
Receiver42	42	1	0.0	70.7	66	70.7	10	Snd Lvl	64.9	5.8	5	0.8
Receiver43	43	1	0.0	70.0	66	70.0	10	Snd Lvl	64.7	5.3	5	0.3
Receiver44	44	1	0.0	67.4	66	67.4	10	Snd Lvl	63.5	3.9	5	-1.1
Receiver45	45	1	0.0	67.2	66	67.2	10	Snd Lvl	63.9	3.3	5	-1.7
Receiver46	46	1	0.0	67.2	66	67.2	10	Snd Lvl	64.3	2.9	5	-2.1
Receiver47	47	1	0.0	66.1	66	66.1	10	Snd Lvl	63.5	2.6	5	-2.4
Receiver49	49	1	0.0	65.8	66	65.8	10	----	65.1	0.7	5	-4.3
Receiver50	50	1	0.0	65.0	66	65.0	10	----	64.3	0.7	5	-4.3
Receiver51	51	1	0.0	64.6	66	64.6	10	----	64.1	0.5	5	-4.5
Receiver52	52	1	0.0	65.2	66	65.2	10	----	64.8	0.4	5	-4.6
Receiver53	53	1	0.0	65.6	66	65.6	10	----	65.1	0.5	5	-4.5
Receiver54	54	1	0.0	64.3	66	64.3	10	----	63.9	0.4	5	-4.6

Receiver55	55	1	0.0	62.7	66	62.7	10	---	62.7	0.0	5	-5.0
Firefighter Park	92	4	0.0	69.3	66	69.3	10	Snd Lvl	63.8	5.5	5	0.5
Firefighter Park	93	4	0.0	69.2	66	69.2	10	Snd Lvl	63.5	5.7	5	0.7
Firefighter Park	94	4	0.0	70.1	66	70.1	10	Snd Lvl	63.8	6.3	5	1.3
Firefighter Park	95	4	0.0	70.8	66	70.8	10	Snd Lvl	63.7	7.1	5	2.1
Firefighter Park	96	4	0.0	71.6	66	71.6	10	Snd Lvl	64.4	7.2	5	2.2
Firefighter Park	97	4	0.0	72.1	66	72.1	10	Snd Lvl	64.9	7.2	5	2.2
Firefighter Park	98	4	0.0	72.2	66	72.2	10	Snd Lvl	65.1	7.1	5	2.1
Firefighter Park	99	4	0.0	72.1	66	72.1	10	Snd Lvl	65.1	7.0	5	2.0
Firefighter Park	100	4	0.0	66.7	66	66.7	10	Snd Lvl	61.7	5.0	5	0.0

Dwelling Units	**# DUs**	**Noise Reduction**		
		Min	**Avg**	**Max**
		dB	**dB**	**dB**
All Selected	60	0.0	4.2	7.2
All Impacted	50	2.6	5.2	7.2
All that meet NR Goal	40	5.0	6.1	7.2

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg 11 - Wattles to Coolidge - Walls
BARRIER DESIGN: SB1-4
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver1	1	1	0.0	65.0	66	65.0	10	----	61.7	3.3	5	-1.7
Receiver2	2	1	0.0	67.8	66	67.8	10	Snd Lvl	63.5	4.3	5	-0.7
Receiver3	3	1	0.0	69.3	66	69.3	10	Snd Lvl	62.7	6.6	5	1.6
Receiver4	4	1	0.0	69.2	66	69.2	10	Snd Lvl	62.5	6.7	5	1.7
Receiver5	5	1	0.0	69.0	66	69.0	10	Snd Lvl	62.1	6.9	5	1.9
Receiver6	6	1	0.0	69.6	66	69.6	10	Snd Lvl	62.2	7.4	5	2.4
Receiver7	7	1	0.0	69.6	66	69.6	10	Snd Lvl	62.3	7.3	5	2.3
Receiver8	8	1	0.0	69.8	66	69.8	10	Snd Lvl	62.6	7.2	5	2.2
Receiver9	9	1	0.0	69.6	66	69.6	10	Snd Lvl	62.8	6.8	5	1.8
Receiver10	10	1	0.0	69.7	66	69.7	10	Snd Lvl	63.1	6.6	5	1.6
Receiver11	11	1	0.0	70.4	66	70.4	10	Snd Lvl	63.6	6.8	5	1.8
Receiver12	12	1	0.0	70.7	66	70.7	10	Snd Lvl	64.2	6.5	5	1.5
Receiver13	13	1	0.0	71.2	66	71.2	10	Snd Lvl	64.8	6.4	5	1.4
Receiver14	14	1	0.0	72.4	66	72.4	10	Snd Lvl	65.8	6.6	5	1.6
Receiver15	15	1	0.0	73.4	66	73.4	10	Snd Lvl	66.1	7.3	5	2.3
Receiver16	16	1	0.0	74.6	66	74.6	10	Snd Lvl	67.1	7.5	5	2.5
Receiver17	17	1	0.0	75.8	66	75.8	10	Snd Lvl	65.3	10.5	5	5.5
Receiver18	18	1	0.0	76.0	66	76.0	10	Snd Lvl	65.9	10.1	5	5.1
Receiver19	19	1	0.0	76.0	66	76.0	10	Snd Lvl	65.6	10.4	5	5.4
Receiver20	20	1	0.0	75.9	66	75.9	10	Snd Lvl	66.4	9.5	5	4.5
Receiver21	21	1	0.0	75.1	66	75.1	10	Snd Lvl	66.2	8.9	5	3.9
Receiver22	22	1	0.0	75.5	66	75.5	10	Snd Lvl	66.5	9.0	5	4.0
Receiver23	23	1	0.0	73.9	66	73.9	10	Snd Lvl	65.2	8.7	5	3.7

Receiver24	24	1	0.0	73.9	66	73.9	10	Snd Lvl	64.7	9.2	5	4.2
Receiver25	25	1	0.0	70.3	66	70.3	10	Snd Lvl	64.5	5.8	5	0.8
Receiver26	26	1	0.0	68.2	66	68.2	10	Snd Lvl	60.5	7.7	5	2.7
Receiver27	27	1	0.0	65.6	66	65.6	10	----	60.0	5.6	5	0.6
Receiver28	28	1	0.0	63.5	66	63.5	10	----	56.5	7.0	5	2.0
Receiver57	57	8	0.0	71.1	66	71.1	10	Snd Lvl	61.9	9.2	5	4.2
Receiver58	58	6	0.0	75.0	66	75.0	10	Snd Lvl	61.2	13.8	5	8.8
Receiver59	59	8	0.0	76.5	66	76.5	10	Snd Lvl	61.5	15.0	5	10.0
Receiver60	60	6	0.0	67.8	66	67.8	10	Snd Lvl	59.9	7.9	5	2.9
Receiver61	61	4	0.0	67.9	66	67.9	10	Snd Lvl	60.6	7.3	5	2.3
Receiver62	62	4	0.0	64.2	66	64.2	10	----	54.2	10.0	5	5.0
Receiver63	63	4	0.0	62.3	66	62.3	10	----	57.7	4.6	5	-0.4
Receiver64	64	4	0.0	58.8	66	58.8	10	----	56.8	2.0	5	-3.0
Receiver65	65	4	0.0	60.4	66	60.4	10	----	58.0	2.4	5	-2.6
Receiver66	66	4	0.0	62.2	66	62.2	10	----	58.3	3.9	5	-1.1
Receiver67	67	4	0.0	66.4	66	66.4	10	Snd Lvl	60.5	5.9	5	0.9
Receiver68	68	4	0.0	73.2	66	73.2	10	Snd Lvl	61.0	12.2	5	7.2
Receiver69	69	4	0.0	75.6	66	75.6	10	Snd Lvl	61.1	14.5	5	9.5
Receiver70	70	4	0.0	76.8	66	76.8	10	Snd Lvl	61.8	15.0	5	10.0
Receiver71	71	4	0.0	75.4	66	75.4	10	Snd Lvl	62.1	13.3	5	8.3
Receiver72	72	4	0.0	66.4	66	66.4	10	Snd Lvl	59.5	6.9	5	1.9
Receiver73	73	4	0.0	57.2	66	57.2	10	----	54.0	3.2	5	-1.8
Receiver74	74	4	0.0	54.8	66	54.8	10	----	49.7	5.1	5	0.1
Receiver75	75	4	0.0	54.0	66	54.0	10	----	51.6	2.4	5	-2.6
Receiver76	76	4	0.0	54.9	66	54.9	10	----	51.6	3.3	5	-1.7
Receiver77	77	4	0.0	59.8	66	59.8	10	----	58.3	1.5	5	-3.5
Receiver87	87	4	0.0	63.2	66	63.2	10	----	56.3	6.9	5	1.9
Receiver89	89	3	0.0	66.7	66	66.7	10	Snd Lvl	57.8	8.9	5	3.9
Receiver90	90	3	0.0	67.5	66	67.5	10	Snd Lvl	60.9	6.6	5	1.6

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	134	1.5	7.5	15.0
All Impacted	87	4.3	8.6	15.0
All that meet NR Goal	100	5.1	8.5	15.0

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg12 - Coolidge to Adams - Build
BARRIER DESIGN: NB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier					With Barrier			
				LAeq1h		Increase over existing		Type Impact	Calculated LAeq1h	Noise Reduction		
				Calculated	Crit'n	Calculated	Crit'n Sub'l Inc			Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver7	7	1	0.0	69.3	66	69.3	10	Snd Lvl	69.0	0.3	5	-4.7
Receiver8	8	1	0.0	73.7	66	73.7	10	Snd Lvl	71.8	1.9	5	-3.1
Receiver10	10	1	0.0	69.2	66	69.2	10	Snd Lvl	62.4	6.8	5	1.8
Receiver11	11	1	0.0	69.9	66	69.9	10	Snd Lvl	63.8	6.1	5	1.1
Receiver12	12	1	0.0	71.7	66	71.7	10	Snd Lvl	64.5	7.2	5	2.2
Receiver13	13	1	0.0	69.9	66	69.9	10	Snd Lvl	64.3	5.6	5	0.6
Receiver14	14	1	0.0	68.5	66	68.5	10	Snd Lvl	64.6	3.9	5	-1.1
Receiver15	15	1	0.0	67.4	66	67.4	10	Snd Lvl	63.9	3.5	5	-1.5
Receiver16	16	1	0.0	67.2	66	67.2	10	Snd Lvl	63.7	3.5	5	-1.5
Receiver17	17	1	0.0	66.2	66	66.2	10	Snd Lvl	62.3	3.9	5	-1.1

Dwelling Units	# DUs	Noise Reduction		
		Min	Avg	Max
		dB	dB	dB
All Selected	10	0.3	4.3	7.2
All Impacted	10	0.3	4.3	7.2
All that meet NR Goal	4	5.6	6.4	7.2

The Corradino Group
John Bucher

23 September 2014
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: I-75 Noise Study
RUN: Seg12 - Coolidge to Adams - Build
BARRIER DESIGN: SB1&2
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
Receiver37	37	1	0.0	63.9	66	63.9	10	----	60.3	3.6	5	-1.4
Receiver38	38	1	0.0	64.8	66	64.8	10	----	59.8	5.0	5	0.0
Receiver39	39	1	0.0	65.3	66	65.3	10	----	59.2	6.1	5	1.1
Receiver40	40	1	0.0	67.4	66	67.4	10	Snd Lvl	58.7	8.7	5	3.7
Receiver41	41	1	0.0	65.0	66	65.0	10	----	59.2	5.8	5	0.8
Receiver42	42	1	0.0	59.1	66	59.1	10	----	53.9	5.2	5	0.2
Receiver43	43	1	0.0	56.7	66	56.7	10	----	54.8	1.9	5	-3.1
Receiver44	44	1	0.0	57.1	66	57.1	10	----	54.5	2.6	5	-2.4
Receiver45	45	1	0.0	56.0	66	56.0	10	----	50.4	5.6	5	0.6
Receiver46	46	1	0.0	72.0	66	72.0	10	Snd Lvl	63.3	8.7	5	3.7
Receiver47	47	1	0.0	72.5	66	72.5	10	Snd Lvl	63.2	9.3	5	4.3
Receiver48	48	1	0.0	71.7	66	71.7	10	Snd Lvl	61.7	10.0	5	5.0
Receiver49	49	1	0.0	69.4	66	69.4	10	Snd Lvl	60.1	9.3	5	4.3
Receiver50	50	1	0.0	63.2	66	63.2	10	----	56.1	7.1	5	2.1
Receiver51	51	1	0.0	61.9	66	61.9	10	----	54.9	7.0	5	2.0
Receiver52	52	1	0.0	70.7	66	70.7	10	Snd Lvl	60.8	9.9	5	4.9
Receiver53	53	1	0.0	66.6	66	66.6	10	Snd Lvl	58.4	8.2	5	3.2
Receiver54	54	1	0.0	67.2	66	67.2	10	Snd Lvl	62.3	4.9	5	-0.1
Receiver55	55	1	0.0	75.9	66	75.9	10	Snd Lvl	67.6	8.3	5	3.3
Receiver56	56	1	0.0	68.1	66	68.1	10	Snd Lvl	66.9	1.2	5	-3.8

Dwelling Units	# DUs	Noise Reduction Min	Avg	Max
		dB	dB	dB

All Selected	20	1.2	6.4	10.0
All Impacted	10	1.2	7.8	10.0
All that meet NR Goal	15	5.0	7.6	10.0

APPENDIX H

LOCATION, HEIGHT, AND COST FOR FEASIBLE AND REASONABLE NOISE BARRIERS

(for design)

These files support design by providing specific data about walls locations with geographic coordinates.

Segment 1 NB1

	X	Y	Z	Height	Cost
point921	13466665.0	348593.9	632	14	$93,180
point923	13466657.0	348741.6	632	14	$127,920
point929	13466633.0	348943.2	631	16	$117,929
point 930	3466616.0	349106.1	630	16	
				Total:	$339,029

Segment 1 NB2

	X	Y	Z	Height	Cost
point974	13466537.0	350384.8	634	0	$0
point975	13466567.0	350265.7	633	0	$0
point976	13466584.0	350134.0	632	14	$63,452
point977	13466596.0	350034.0	632	14	$68,283
point891	13466599.0	349925.6	632	14	$94,477
point933	13466607.0	349775.9	632	14	$94,477
point934	13466615.0	349626.1	632	14	$94,477
point935	13466623.0	349476.4	632	12	$80,980
point936	13466631.0	349326.6	632	8	$53,987
point892	13466639.0	349176.9	632	8	$35,233
point893	13466650.0	349079.6	632	8	
				Total:	$585,366

Segment 2 NB1

	X	Y	Z	Height	Cost
point272	13465330.0	351840.1	632	14	$69,395
point215	13465430.0	351793.9	632	14	$110,870
point216	13465578.0	351698.7	632	16	$106,063
point217	13465701.0	351617.7	632	14	$66,087
point281	13465782.0	351551.0	632	12	$47,369
point282	13465847.0	351492.1	632	10	$35,722
point283	13465904.0	351436.8	632	10	$36,374
point284	13465963.0	351381.6	632	10	$32,375
point285	13466015.0	351331.9	632	10	$31,139
point286	13466059.0	351278.5	632	10	$50,744
point287	13466129.0	351190.1	632	10	$36,283
point290	13466178.0	351126.0	632	10	$101,978
point253	13466305.0	350938.3	632	10	$79,158
point254	13466388.0	350783.2	632	10	$40,160
point255	13466423.0	350701.2	632	10	
				Total:	$843,717

Segment 2 NB2

	X	Y	Z	Height	Cost
point256	13464416.0	352144.6	632	10	$46,202
point257	13464512.0	352108.2	632	14	$329,274
point258	13465012.0	351955.9	632	12	$37,216
point259	13465078.0	351936.1	632	12	$146,045
point260	13465310.0	351797.1	632	12	
				Total:	$558,737

Segment 2 SB1

	X	Y	Z	Height	Cost
point261	13465128.0	351678.0	632	8	$15,249
point262	13465167.0	351661.4	632	8	$78,047
point263	13465363.0	351568.8	632	10	$111,194
point264	13465565.0	351426.5	632	12	$138,190
point265	13465763.0	351264.3	632	10	$116,465
point266	13465929.0	351065.8	632	12	$105,494
point267	13466038.0	350903.7	632	10	$56,880
point268	13466107.0	350797.8	632	12	$56,787
point269	13466150.0	350701.8	632	8	$30,558
point270	13466180.0	350622.4	632	8	$17,760
point271	13466197.0	350576.1	632	8	
				Total:	$726,624

Segment 3 NB1

	X	Y	Z	Height	Cost
point281	13462733.0	355522.1	632	14	$167,888
point282	13462822.0	355270.9	632	16	$194,870
point283	13462899.0	355011.5	633	20	$249,798
point284	13462972.0	354743.7	632	18	$249,753
point285	13463075.0	354453.1	632	16	$143,028
point286	13463148.0	354268.3	632	16	
				Total:	$1,005,337

Segment 3 SB1

	X	Y	Z	Height	Cost
point263	13462953.0	354266.4	632	14	$132,974
point264	13462894.0	354469.0	632	14	$147,268
point265	13462824.0	354692.1	632	14	$94,287
point266	13462774.0	354833.1	632	14	$121,282
point267	13462698.0	355010.0	633	12	$66,680
point268	13462648.0	355122.9	633		
				Total:	$562,491

Segment 4 NB1

	X	Y	Z	Height	Cost
point126	13462448.0	356443.9	633	16	$105,055
point127	13462486.0	356303.1	632	14	$156,103
point128	13462547.0	356062.9	632	16	$200,642
point129	13462620.0	355794.0	633	14	$89,969
point130	13462668.0	355659.5	633	14	
				Total:	$551,769

Segment 4 SB2

	X	Y	Z	Height	Cost
point303	13462049.0	357077.7	635	12	$56,215
point304	13462081.0	356978.6	635	14	$67,521
point305	13462114.0	356876.6	635	16	$94,205
point306	13462151.0	356751.1	634	14	$75,166
point307	13462187.0	356637.4	634	16	$95,525
point308	13462227.0	356510.9	634	16	$126,178
point309	13462284.0	356345.2	634	14	$63,755
point310	13462309.0	356247.1	634	14	$59,839
point311	13462332.0	356154.9	634	14	$87,153
point312	13462365.0	356020.6	634	14	$73,837
point313	13462389.0	355905.9	634	12	$82,561
point314	13462423.0	355756.8	633	8	$43,511
point315	13462446.0	355638.2	633	8	
				Total:	$925,466

Segment 5 NB5

	X	Y	Z	Height	Cost
point1450	13461361.0	361147.1	634	10	$15,263
point1452	13461368.0	361113.9	633	10	$56,290
point1453	13461398.0	360992.4	633	10	$17,978
point1455	13461409.0	360954.0	634	10	$30,866
point1456	13461428.0	360888.1	634	10	
				Total:	$120,397

Segment 5 NB6

	X	Y	Z	Height	Cost
point1417	13460913.0	362624.2	635	16	$45,167
point1419	13460931.0	362564.1	635	16	$72,330
point1421	13460961.0	362468.2	635	16	$73,470
point1423	13460992.0	362371.0	635	16	$61,787
point1425	13461018.0	362289.2	635	16	$83,971
point1427	13461053.0	362178.0	635	16	$57,233
point1429	13461077.0	362102.2	635	16	$62,237
point1431	13461103.0	362019.8	635	16	$50,581
point1432	13461121.0	361951.8	634	16	$49,869
point1433	13461141.0	361885.5	634	16	$85,157
point1435	13461175.0	361772.2	632	16	$68,659
point1406	13461204.0	361681.4	630	16	$62,341
point1408	13461225.0	361597.4	628	16	$61,065
point1410	13461244.0	361514.8	624	16	$70,623
point1412	13461265.0	361418.9	622	16	$63,501
point1414	13461284.0	361332.8	619	16	$59,745
point1416	13461301.0	361251.6	616	16	
				Total:	$1,027,736

Segment 5 NB7

	X	Y	Z	Height	Cost
point1437	13460808.0	363284.1	636	16	$76,743
point1438	13460836.0	363181.2	636	16	$38,285
point1439	13460845.0	363128.8	636	16	$55,803
point1440	13460858.0	363052.4	635	16	$71,295
point1441	13460883.0	362956.6	635	16	$78,090
point1442	13460911.0	362851.8	635	16	$81,615
point1443	13460941.0	362742.5	635	16	$64,116
point1444	13460966.0	362657.1	635	16	$44,706
point1445	13460983.0	362597.3	635	16	$53,346
point1446	13461005.0	362526.6	635	16	$54,035
point1447	13461028.0	362455.2	635	16	
				Total:	$618,034

Segment 5a NB2

	X	Y	Z	Height	Cost
point848	13460442.0	364951.3	636	14	$8,840
point849	13460442.0	364965.4	636	14	$33,469
point850	13460442.0	365018.5	636	14	$37,250
point851	13460440.0	365077.6	636	14	$34,545
point852	13460436.0	365132.3	636	14	$30,279
point853	13460433.0	365180.2	636	14	$24,032
point854	13460431.0	365218.3	636	14	$31,950
point855	13460428.0	365269.0	636	14	$31,110
point856	13460424.0	365318.2	636	14	$31,065
point857	13460421.0	365367.4	636	14	$36,509
point858	13460417.0	365425.2	636	14	$29,651
point859	13460414.0	365472.2	636	14	$26,923
point860	13460412.0	365514.9	636	14	$25,114
point861	13460409.0	365554.6	636	16	$25,360
point862	13460406.0	365589.7	636	16	$29,426
point863	13460401.0	365630.3	636	16	$16,633
point864	13460398.0	365653.2	636	16	$18,149
point865	13460397.0	365678.4	636	16	$24,747
point866	13460395.0	365712.7	636	16	$35,962
point925	13460394.0	365762.6	636	14	$144,547
point926	13460382.0	365991.8	635	14	$121,512
point927	13460371.0	366184.3	635	14	
				Total:	$797,073

Segment 6 SB1

	X	Y	Z	Height	Cost
point274	13460557.0	369245.9	636	0	$0
point275	13460587.0	369426.4	633	20	$140,548
point179	13460614.0	369580.2	632	20	$68,691
point187	13460631.0	369654.6	632	20	$104,739
point180	13460655.0	369768.5	632	20	$185,983
point181	13460698.0	369970.6	633	16	$70,782
point182	13460692.0	370068.8	633	16	
				Total:	$570,743

Segment 7 NB1

	X	Y	Z	Height	Cost
point141	13460733.0	374200.4	648	10	$411,132
point142	13460706.0	374852.5	642	10	
				Total:	$411,132

Segment 7 NB2

	X	Y	Z	Height	Cost
point137	13460764.0	374815.9	640	10	$1,259,803
point138	13460677.0	376563.5	640	10	$795,606
point139	13460623.0	377667.2	640	10	$328,028
point140	13460655.0	378121.6	640	10	
				Total:	$2,383,437

Segment 8 SB1

	X	Y	Z	Height	Cost
point144	13459477.0	387481.2	642	14	$137,350
point145	13459593.0	387296.7	642	14	$47,764
point146	13459633.0	387232.2	642	14	$117,341
point147	13459721.0	387068.1	642	14	$137,869
point148	13459797.0	386862.9	642	14	$153,771
point149	13459871.0	386630.3	642	14	$119,049
point150	13459904.0	386444.2	642	14	$57,557
point151	13459918.0	386353.9	642	14	
				Total:	$770,701

Segment 9 NB1

	X	Y	Z	Height	Cost
point415	13455696.0	388611.0	671	8	$42,480
point416	13455814.0	388611.0	671	10	$190,555
point417	13456237.0	388630.6	677	12	$82,123
point418	13456389.0	388635.5	677	10	$79,772
point419	13456566.0	388645.3	678	10	
				Total:	$394,930

Segment 9 NB2

	X	Y	Z	Height	Cost
point385	13453995.0	388576.6	670	10	$285,990
point386	13454630.0	388602.7	666	12	$260,047
point387	13455111.0	388626.1	666	12	$188,795
point388	13455460.0	388646.9	665	14	$196,731
point389	13455772.0	388659.9	664	14	
				Total:	$931,563

Segment 9 SB1

	X	Y	Z	Height	Cost
point410	13453161.0	388286.7	677	10	$35,100
point411	13453083.0	388286.7	677	12	$109,209
point412	13452881.0	388276.8	679	14	$142,414
point413	13452655.0	388271.9	684	12	$71,477
point414	13452523.0	388262.1	685	12	
				Total:	$358,200

Segment 9 SB2

	X	Y	Z	Height	Cost
point395	13455857.0	387961.0	663	16	$83,162
point396	13455752.0	388009.1	663	16	$89,827
point397	13455645.0	388073.3	663	16	$229,437
point398	13455364.0	388223.6	665	16	$145,034
point399	13455174.0	388290.5	666	16	$75,720
point400	13455070.0	388306.1	667	16	$93,899
point401	13454940.0	388316.5	667	16	$174,240
point402	13454698.0	388316.5	667	16	$159,296
point403	13454477.0	388306.1	667	16	$159,296
point404	13454256.0	388295.7	667	16	$174,401
point405	13454014.0	388285.3	669	16	$170,898
point406	13453777.0	388272.2	671	16	$149,947
point407	13453569.0	388261.8	671	16	$168,740
point408	13453335.0	388248.8	670	16	$183,838
point409	13453080.0	388235.8	668	16	
				Total:	$2,057,735

Segment 10 SB1

	X	Y	Z	Height	Cost
point315	13448425.0	394695.5	712	14	$210,769
point317	13448390.0	394362.8	712	8	$103,438
point319	13448393.0	394075.5	711	8	$64,253
point320	13448395.0	393897.0	711	10	$153,974
point323	13448420.0	393555.8	708	10	$128,904
point326	13448429.0	393269.4	708	16	$222,409
point329	13448425.0	392960.6	714	16	$162,045
point332	13448440.0	392736.0	709	12	$113,348
point334	13448445.0	392526.2	710	8	$59,039
point335	13448454.0	392362.4	707	8	$61,510
point336	13448463.0	392191.8	705	10	$111,101
point337	13448473.0	391945.1	703	10	
				Total:	$1,390,790

Segment 11a NB1

	X	Y	Z	Height	Cost
point309	13448649.0	394857.5	707	8	$47,378
point310	13448655.0	394988.9	708	8	$43,776
point300	13448672.0	395109.3	710	8	$131,275
point301	13448691.0	395473.5	709	14	$158,421
point302	13448704.0	395724.6	709	14	$152,275
point303	13448707.0	395966.3	710	14	$112,907
point304	13448697.0	396145.2	711	8	$105,103
point305	13448700.0	396437.2	712	0	$0
point307	13448697.0	396710.2	714	0	$0
point308	13448688.0	396986.0	716	0	
				Total:	$751,135

Segment 11a SB1

	X	Y	Z	Height	Cost
point294	13448523.0	396044.9	712	18	$252,725
point295	13448534.0	395733.1	711	18	$244,110
point296	13448530.0	395431.8	710	18	$219,012
point297	13448515.0	395161.8	710	18	$160,428
point298	13448492.0	394965.1	710	18	$101,864
point299	13448499.0	394839.5	710	18	
				Total:	$978,139

Segment 11 SB1

	X	Y	Z	Height	Cost
point357	13441829.0	404848.7	810	14	$95,278
point358	13441678.0	404840.2	815	14	$128,086
point359	13441475.0	404829.0	821	14	$119,173
point360	13441286.0	404821.1	824	14	$133,680
point361	13441074.0	404812.1	828	14	$109,120
point362	13440901.0	404803.7	831	14	$147,590
point363	13440667.0	404792.4	834	14	$113,542
point364	13440487.0	404783.4	838	14	
				Total:	$846,469

Segment 11 SB2

	X	Y	Z	Height	Cost
point365	13441762.0	404772.2	802	16	$166,537
point366	13441993.0	404784.0	801	14	$175,232
point367	13442271.0	404793.0	799	12	$159,914
point368	13442567.0	404802.0	795	12	
				Total:	$501,683

Segment 11 SB3

	X	Y	Z	Height	Cost
point344	13444699.0	404909.2	821	16	$385,582
point345	13444164.0	404885.4	821	14	$294,053
point346	13443698.0	404858.9	815	14	$265,487
point347	13443277.0	404840.4	812	16	$340,182
point348	13442805.0	404819.2	789	16	
				Total:	$1,285,304

Segment 11 SB4

	X	Y	Z	Height	Cost
point387	13442932.0	404890.4	805	16	$61,213
point388	13442847.0	404888.7	805	16	$114,643
point389	13442688.0	404880.2	805	16	$105,209
point390	13442542.0	404874.2	805	16	$96,639
point391	13442408.0	404866.5	805	16	
				Total:	$377,704